Black&White

Client	STACK
Project No.	P10471
Date	03.05.2024
Revision	-
Reference	4025-ES-D-RM-05

Firmato digitalmente da:
Roberto Cereda
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STACK

MIL05

MECHANICAL EQUIPMENT SCHEDULE

MAY 2024

HVAC EQUIPMENT SCHEDULES

Fan Schedule

AHU Data Sheet

VRF Schedule

Air Terminal Schedule

Attenuator Schedule

Heaters

Louvres Schedule

Overdoor Heater Schedule

Overpressure Damper Schedule

Pressurization Units and Expansion

Vacuum Degasser Schedule

EQUIPMENT SCHEDULE

Lombardini22 DESIGN THINKING
Black&White

FAN			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-											
Date:	03/05/2024											
By:	JN											

Unit Reference	Location	Area Served	Type	Inlet/ Discharge	QTY	Air Flow Rate	Fan ESP	Fan Efficiency	Fan Speed	Input	Supply	Motor Current	Starter Type	Emergency	Starter Panel	Length	Width	Height	Weight	Sound Pressure Level	Comments
					N	L/s	Pa	Class	rpm	kW	V / Hz / Ph	A		(Y/N)	(Y/N)	mm	mm	mm	kg	dB(A)	
SEAF01-O-01 to 04	Roof	Data Hall (refer to plans)	Smoke extract air fan	Discharge	4	11255	415	Manufacturer to advise	Manufacturer to advise	28.14	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SEAF02-O-01 to 04	Roof	IDF (refer to plans)	Smoke extract air fan	Discharge	4	705	100	Manufacturer to advise	Manufacturer to advise	1.41	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SEAF03-O-01	First Floor	Tenant Storage (refer to plans)	Smoke extract air fan	Discharge	1	1950	185	Manufacturer to advise	Manufacturer to advise	4.88	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SEAF03-O-02	Ground Floor	Tenant Storage (refer to plans)	Smoke extract air fan	Discharge	1	1715	185	Manufacturer to advise	Manufacturer to advise	4.29	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SEAF04-O-01 to 02	Ground Floor and First Floor	Tenant Storage (refer to plans)	Smoke extract air fan	Discharge	2	3880	155	Manufacturer to advise	Manufacturer to advise	9.70	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SEAF05-O-01	Ground Floor	SOC Storage (refer to plans)	Smoke extract air fan	Discharge	1	285	100	Manufacturer to advise	Manufacturer to advise	0.71	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF01-O-01 to 04	Roof	Data Hall (refer to plans)	Smoke make-up air fan	Inlet	4	8600	300	Manufacturer to advise	Manufacturer to advise	21.50	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF02-O-01 to 04	Roof	IDF (refer to plans)	Smoke make-up air fan	Inlet	4	360	100	Manufacturer to advise	Manufacturer to advise	0.72	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF03-O-01	First Floor	Tenant Storage (refer to plans)	Smoke make-up air fan	Inlet	1	990	120	Manufacturer to advise	Manufacturer to advise	2.48	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF03-O-02	Ground Floor	Tenant Storage (refer to plans)	Smoke make-up air fan	Inlet	1	870	120	Manufacturer to advise	Manufacturer to advise	2.18	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF04-O-01	First Floor	Tenant Storage (refer to plans)	Smoke make-up air fan	Inlet	1	1970	100	Manufacturer to advise	Manufacturer to advise	4.93	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF04-O-02	Ground Floor	Tenant Storage (refer to plans)	Smoke make-up air fan	Inlet	1	1830	100	Manufacturer to advise	Manufacturer to advise	4.58	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF06-O-01	First Floor	Smoke Filter (refer to plans)	Smoke make-up air fan	Inlet	1	692	155	Manufacturer to advise	Manufacturer to advise	0.60	230/50/1	Manufacturer to advise								-	Fire rated 2 hr at 400°C
SIAF07-O-01 to 05	Ground Floor and First Floor	Smoke Filter (refer to plans)	Smoke make-up air fan	Inlet	5	599	130	Manufacturer to advise	Manufacturer to advise	0.30	230/50/1	Manufacturer to advise								-	Fire rated 2 hr at 400°C
FAF01-O-01	Ground Floor	Valve Room (External)	Make-up air fan	Inlet	1	60	100	Manufacturer to advise	Manufacturer to advise	0.13	230/50/1	Manufacturer to advise								-	Note 06
FAF02-O-01 to 02	Ground Floor	Fire Pump Room 1 (External)	Make-up air fan	Inlet	2	130	150	Manufacturer to advise	Manufacturer to advise	0.13	230/50/1	Manufacturer to advise								-	Note 06
SEAF06-O-01 to 04	Ground Floor	MV Room A & B (refer to plans)	Smoke Extract/ General Extract air fan	Discharge	4	3019	100	Manufacturer to advise	Manufacturer to advise	7.55	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C Note 06
SEAF07-O-01 to 02	Ground Floor	MMR Room & POE (refer to plans)	Smoke Extract	Discharge	2	615	100	Manufacturer to advise	Manufacturer to advise	1.54	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C Note 06
SEAF08-O-01	Ground Floor	Electrical Room (refer to plans)	Smoke Extract	Discharge	1	370	100	Manufacturer to advise	Manufacturer to advise	0.93	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C Note 06
SEAF09-O-01	Ground Floor	Electrical Gallery (refer to plans)	Smoke Extract	Discharge	8	4500	300	Manufacturer to advise	Manufacturer to advise	11.25	380/50/3	Manufacturer to advise								-	Fire rated 2 hr at 400°C Note 06

ADDITIONAL NOTES		
Item	**B&W Specifies**	**Vendor Proposes**
01	Schedule to be read in conjuction with Specifications, Data sheet, Layouts and Schematics.	
02	Electrical details, motor kW rating, sound power level, equipment dimensions and weights shall be confirmed by the manufacturer.	
03	Fan Selection to consider additional 10% on flow rate for duct leakage and 20% on pressure losses.	
04	Contractor to submit actual external static pressure calculations based on shop drawings for Engineer's assessment prior to procurement and production.	
05	This equipment schedule has been prepared for tender purpose only.	
06	ESP values are estimated only and shall be verified by the contractor at construction stage considering final selections and actual site conditions.	

Air Handling Units Data Sheet

DATA HALL AIR HANDLING UNITS			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU01-O-XX		

Revision History:

Revision:	-											
Date:	03/05/2024											
By:	JN											

DATA HALL AIR HANDLING UNITS

1.00 Manufacturer's Details

Item	Description	Units	Vendor Specifies
1.01	Manufacturer's Name	-	
1.02	Manufacturer's Local Office Location	-	
1.03	Manufacturer's Global Head Office	-	
1.04	Location of Factory and Assembly of the AHU	-	
1.05	Location of Factory Acceptance Tests	-	
1.06	Manufacturer's Quotation Reference	-	
1.07	Manufacturer's Model Number	-	
1.08	Manufacturer's Model Data Sheet Reference	-	

2.00 Site Data

Item	Description	Units	B&W Specifies	Vendor Complies
2.01	Site Location	-	Vignate, Italy	
2.02	Equipment Location	-	Roof Level	
2.03	Area Served	-	Data Halls	
2.04	Quantity	No.	8	
2.05	Site Altitude	m	121	
2.06	Ambient Conditions	°C DB / WB	Based on ASHRAE n=20 years	

2.00 UNIT TYPE

Item	Description	Units	B&W Specifies	Vendor Complies
2.01	Installation Type (Ceiling Suspended , Floor Mounted...etc)	-	External Floor Mounted	
2.02	Cooling Medium (Chilled Water, Refrigerant DX..etc)		Refrigerant DX	

3.00 AHU Sections

Item	Description	Units	B&W Specifies	Vendor
3.01	Intake Damper (Motorised)	-	Required	
3.02	Intake Acoustic Attenuator	-	Required,duct mounted type (external)	
3.03	Discharge Damper (Motorised)	-	Required	
3.04	Discharge Acoustic Attenuator	-	Required,duct mounted type (external)	
3.05	Frost Coil	-	Not Required	
3.06	Mixing Box	-	Required	
3.07	Panel Filter - M5	-	Required	
3.08	Carbon Filter - G612	-	Not Required	
3.09	Bag Filter - F7	-	Required	
3.10	Energy Recovery	-	(via mixing box)	
3.11	Energy Recovery Bypass	-	Not Required	
3.12	Heating Coil	-	DX cooling/heating coil	
3.13	Electric Heating Coil	-	Required	
3.14	Cooling Coil	-	DX cooling/heating coil	
3.15	Re-Heating Coil	-	Required	
3.16	Humidifier	-	Not Required	
3.17	Supply Fan	-	Required	
3.18	Extract Fan	-	Required	
3.19	Supply Damper (Motorised)	-	Required	
3.20	Supply Acoustic Attenuator	-	Required,duct mounted type (external)	
3.21	Supply Connection Section	-	Required	
3.22	Extract Damper (Motorised)	-	Required	
3.23	Extract Acoustic Attenuator	-	Required,duct mounted type (external)	
3.24	Extract Connection Section	-	Required	

4.00 Mixing Box Economiser Summer Performance Data

Item	Description	Units	B&W Specifies	Vendor
4.01	Total Cooling Capacity	kW	Manufacturer to Advise >> >>	
4.02	Outside Air Flow	L/s	825	
4.04	Recirculated Air Flow	L/s	1345	
4.06	Mixed Air Flow	L/s	2170	
4.03	Outside Air Condition	°C DB / WB	33.7/28.7	
4.05	Recirculated Air Condition	°C DB / WB	25.9/19.4	
4.07	Mixed Air Condition	°C DB / WB	28.8/23.4	

5.00 Mixing Box Economiser Winter Performance Data

Item	Description	Units		Vendor
5.01	Total Heating Capacity	kW	Manufacturer to Advise >> >>	
5.02	Outside Air Flow	L/s	825	
5.04	Recirculated Air Flow	L/s	1345	
5.06	Mixed Air Flow	L/s	2170	
5.03	Outside Air Condition	°C DB / WB	-10.1/-10.8	
5.05	Recirculated Air Condition	°C DB / WB	17.1/5.8	
5.07	Mixed Air Condition	°C DB / WB	6.8/-10.8	

Air Handling Units Data Sheet

DATA HALL AIR HANDLING UNITS			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU01-O-XX		

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Date:	03/05/2024											
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DATA HALL AIR HANDLING UNITS

6.00 Cooling Coil Performance Data

Item	Description	Units	B&W Specifies	Vendor
6.01	Medium	-	Direct Expansion	
6.02	Total Cooling Capacity	kW	62.77	
6.03	Sensible Cooling Capacity	kW	32.94	
6.04	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.05	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.06	Entering Air Condition	°C DB / WB	29.3/23.5	
6.07	Leaving Air Condition	°C DB / WB	17.0/16.5	
6.08	Entering Fluid Temperature	°C	n/a	
6.09	Leaving Fluid Temperature	°C	n/a	
6.10	Chilled Water Flow Rate	L/s	n/a	
6.11	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
6.12	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
6.13	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
6.14	Type of Refrigerant	-	R32/ R134a/ R410a or approved equivalent	
6.15	Glycol %	%	n/a	
6.16	Condensate Flow Rate	L/s	Manufacturer to Advise >>	
6.17	Number of Rows	No.	Manufacturer to Advise >>	
6.18	Fin Spacing	mm	Manufacturer to Advise >>	
6.19	Eliminators	Y/N	Manufacturer to Advise >>	

7.00 Heating Coil Performance Data

Item	Description	Units	B&W Specifies	Vendor
7.01	Medium	-	Direct Expansion	
7.02	Total Heating Capacity	kW	24.6	
7.03	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.04	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.05	Entering Air Condition	°C DB / WB	7.3/0.5	
7.06	Leaving Air Condition	°C DB / WB	16.5/5.5	
7.07	Entering Fluid Temperature	°C	n/a	
7.08	Leaving Fluid Temperature	°C	n/a	
7.09	LTHW Flow Rate	L/s	n/a	
7.10	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
7.11	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
7.12	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
7.13	Electrical Supply	V/Ø/Hz	400/3/50	
7.14	Maximum Electric Power	kW	Manufacturer to Advise >>	
7.15	Type of Refrigerant	-	R32/ R134a/ R410a or approved equivalent	
7.16	Glycol %	%	n/a	
7.17	Number of Rows	No.	Manufacturer to Advise >>	
7.18	Fin Spacing	mm	Manufacturer to Advise >>	

8.00 Electric Heating Coil Performance Data (Reheat for Summer)

Item	Description	Units	B&W Specifies	Vendor
8.01	Total Heating Capacity	kW	10.68	
8.02	Entering Air Temperature	°C DB / WB	17.0/16.5	
8.03	Leaving Air Temperature	°C DB / WB	21.0/17.8	
8.04	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
8.05	Electrical Supply	V/Ø/Hz	n/a	
8.06	Maximum Electric Power	kW	n/a	

9.00 Condenser Performance Data

Item	Description	Units	B&W Specifies	Vendor
9.01	Medium	-	R32/ R134a/ R410a or approved equivalent	
9.02	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
9.03	Maximum Electric Power	kW	Manufacturer to Advise >>	
9.04	Air-cooled/Water Cooled	-	Air-cooled	
9.05	Fan Motor (EC,AC..etc)	-	Manufacturer to Advise >>	
9.06	COP/EER	kW/kW	Manufacturer to Advise >>	
9.07	Vertical / Side Discharge		Vertical	

10.00 Supply Fan Performance Data

Item	Description	Units	B&W Specifies	Vendor
10.01	Fan Type	-	Manufacturer to Advise >>	
10.02	Fan Quantity	No.	Manufacturer to Advise >>	
10.03	Motor Type	-	Manufacturer to Advise >>	
10.04	Design Flow Rate	L/s	2,170	
10.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
10.06	External Static Pressure	Pa	345	
10.07	Specific Fan Power	kW/(L/s)	0.0036	

Air Handling Units Data Sheet

DATA HALL AIR HANDLING UNITS			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU01-O-XX		

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Date:	03/05/2024											
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DATA HALL AIR HANDLING UNITS				
10.08	Fan Speed	rpm	Manufacturer to Advise >>	
10.09	Electrical Supply	V/Ø/Hz	400/3/50	
10.10	Maximum Total Absorbed Electric Power	kW	7.81	
10.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	
11.00	**Extract Fan Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
11.01	Fan Type	-	Manufacturer to Advise >>	
11.02	Fan Quantity	No.	Manufacturer to Advise >>	
11.03	Motor Type	-	Manufacturer to Advise >>	
11.04	Design Flow Rate	L/s	1345	
11.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
11.06	External Static Pressure	Pa	230	
11.07	Specific Fan Power	kW/(L/s)	0.0036	
11.08	Fan Speed	rpm	Manufacturer to Advise >>	
11.09	Electrical Supply	V/Ø/Hz	400/3/50	
11.10	Maximum Total Absorbed Electric Power	kW	4.84	
11.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	
12.00	**Humidifier Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Solid Air**
12.01	Humidifier Type	-	n/a	
12.02	Capacity	kg/hr	n/a	
12.03	Air Flow	L/s	n/a	
12.04	Entering Air Condition	°C DB / WB	n/a	
12.05	Leaving Air Condition	°C DB / WB	n/a	
12.06	Electrical Supply	V/Ø/Hz	n/a	
12.07	Maximum Electric Power	kW	n/a	
13.00	**Physical Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
13.01	Max. Overall Length	mm	Manufacturer to Advise >>	
13.02	Max. Overall Width	mm	Manufacturer to Advise >>	
13.03	Max. Overall Height	mm	Manufacturer to Advise >>	
13.04	Side Clearance Between Units	mm	Manufacturer to Advise >>	
13.05	Dry Weight	kg	Manufacturer to Advise >>	
13.06	Max. Operating Weight	kg	Manufacturer to Advise >>	
13.07	Indoor / External Installation		Manufacturer to Advise >>	
13.08	Doube Skin / Single Skin Construction		Manufacturer to Advise >>	
14.00	**Electrical Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
14.01	Main Power Supply	V/Ø/Hz	400/3/50	
14.02	Unit Maximum Absorbed Power - Summer	kW	Manufacturer to Advise >>	
14.03	Unit Maximum Absorbed Power - Winter	kW	Manufacturer to Advise >>	
14.04	Unit Maximum Running Current	A	Manufacturer to Advise >>	
14.05	Unit Maximum Starting Current	A	Manufacturer to Advise >>	
14.06	Unit Full Load Power Factor	-	Manufacturer to Advise >>	
14.07	Unit Full Load Corrected Power Factor	-	Manufacturer to Advise >>	
14.08	Recommended Main Supply Circuit Breaker Rating	A	Manufacturer to Advise >>	
14.09	Control Power Supply	V/Ø/Hz	Manufacturer to Advise >>	
14.10	Control Supply UPS Backed	-	Required	
14.11	Controls Panel	-	Required	
14.12	VFD Panel	-	Required	

15.00	**Noise and Vibration Data**					
Item	**Description**		**B&W Specifies**		**Vendor**	
15.01	Octave Band	Units	Max Sound Power	Max Sound Pressure 10m	Max Sound Power	Max Sound pressure 10m
15.02	63 Hz	dB				
15.03	125 Hz	dB				
15.04	250 Hz	dB				
15.05	500 Hz	dB				
15.06	1 kHz	dB				
15.07	2 kHz	dB				
15.08	4 kHz	dB				
15.09	8 kHz	dB				
15.10	A	dB				

16.00	**Atmosphere Side (Intake and Discharge) Acoustic Performance Data**									
Item	**Description**		**B&W Specifies**				**Vendor**			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
16.01	Octave Band	Units	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge
16.02	63 Hz	dB								

Air Handling Units Data Sheet

DATA HALL AIR HANDLING UNITS			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU01-O-XX		

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DATA HALL AIR HANDLING UNITS

16.03	125 Hz	dB								
16.04	250 Hz	dB								
16.05	500 Hz	dB								
16.06	1 kHz	dB								
16.07	2 kHz	dB								
16.08	4 kHz	dB								
16.09	8 kHz	dB								
16.10	A	dB								

17.00 Room Side (Supply and Extract) Acoustic Performance Data

Item	Description		B&W Specifies				Vendor			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
17.01	Octave Band	Units	Supply	Extract	Supply	Extract	Supply	Extract	Supply	Extract
17.02	63 Hz	dB								
17.03	125 Hz	dB								
17.04	250 Hz	dB								
17.05	500 Hz	dB								
17.06	1 kHz	dB								
17.07	2 kHz	dB								
17.08	4 kHz	dB								
17.09	8 kHz	dB								
17.10	A	dB								

18.00 Additional Features

Item	Description	Units	B&W Specifies	Vendor Proposes
18.01	Energy Metering	-	Required	
18.02	BMS Input and Output	-	Required	
18.03	Anti-vibration Mount	-	Required	
18.04	Smoke Detector	-	Required	
18.05	Droplet Eliminator	-	Required	
18.06	Casing Leakage Classification	-	n/a	
18.07	Casing Thermal Insulation Classification	-	n/a	
18.08	Casing Condensation Insulation Classification	-	n/a	
18.09	Casing Mechanical Strength	-	n/a	
18.10	Frame Material	-	n/a	
18.11	Coil Material	-	n/a	
18.12	HEPA Filters	-	n/a	
18.13	Ozone Generator	-	n/a	
18.14	Fire Rating / Operation in Smoke Mode	-	n/a	

19.00 Approved Manufacturers

Item	Description	Units	B&W Specifies	Vendor Proposes
19.01	Approved Manufacturers	-		

20.00 Notes

Item	Description
20.01	

Air Handling Units Data Sheet

ADMIN AIR HANDLING UNIT			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU02-O-01		

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Revision History:

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Date:	03/05/2024											
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ADMIN AIR HANDLING UNIT				
1.00	**Manufacturer's Details**			
Item	**Description**	**Units**	**Vendor Specifies**	
1.01	Manufacturer's Name	-		
1.02	Manufacturer's Local Office Location	-		
1.03	Manufacturer's Global Head Office	-		
1.04	Location of Factory and Assembly of the AHU	-		
1.05	Location of Factory Acceptance Tests	-		
1.06	Manufacturer's Quotation Reference	-		
1.07	Manufacturer's Model Number	-		
1.08	Manufacturer's Model Data Sheet Reference	-		
2.00	**Site Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Complies**
2.01	Site Location	-	Vignate, Italy	
2.02	Equipment Location	-	Roof Level	
2.03	Area Served	-	Admin area	
2.04	Quantity	No.	1	
2.05	Site Altitude	m	121	
2.06	Ambient Conditions	°C DB / WB	Based on ASHRAE n=20 years	
2.00	**UNIT TYPE**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Complies**
2.01	Installation Type (Ceiling Suspended , Floor Mounted...etc)	-	External Floor Mounted	
2.02	Cooling Medium (Chilled Water, Refrigerant DX..etc)		Refrigerant DX	
3.00	**AHU Sections**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
3.01	Intake Damper (Motorised)	-	Required	
3.02	Intake Acoustic Attenuator	-	Required,duct mounted type (external)	
3.03	Discharge Damper (Motorised)	-	Required	
3.04	Discharge Acoustic Attenuator	-	Required,duct mounted type (external)	
3.05	Frost Coil	-	Required	
3.06	Mixing Box	-	Not Required	
3.07	Panel Filter - M5	-	Required	
3.08	Carbon Filter - G612	-	Not Required	
3.09	Bag Filter - F7	-	Required	
3.10	Energy Recovery	-	Required	
3.11	Energy Recovery Bypass	-	Not Required	
3.12	Heating Coil	-	DX cooling/heating coil	
3.13	Electric Heating Coil	-	Required	
3.14	Cooling Coil	-	DX cooling/heating coil	
3.15	Re-Heating Coil	-	Required	
3.16	Humidifier	-	Not Required	
3.17	Supply Fan	-	Required	
3.18	Extract Fan	-	Required	
3.19	Supply Damper (Motorised)	-	Required	
3.20	Supply Acoustic Attenuator	-	Required,duct mounted type (external)	
3.21	Supply Connection Section	-	Required	
3.22	Extract Damper (Motorised)	-	Required	
3.23	Extract Acoustic Attenuator	-	Required,duct mounted type (external)	
3.24	Extract Connection Section	-	Required	
4.00	**Energy Recovery Summer Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
4.01	Energy Recovery Type	-	Enthalpy Wheel	
4.02	Total Cooling Capacity	kW	71.8	
4.03	Effectiveness (Sensible/Latent)	%	68/85	
4.04	Intake Outdoor Air Temperature	°C DB / WB	31.2/25.2	
4.05	Intake Outdoor Air Flow Rates	L/s	3295	
4.06	Extract Return Air Temperature	°C DB / WB	24.8/17.4	
4.07	Leaving Air Temperature (Supply Side)	°C DB / WB	27.7/20.4	
4.08	Leaving Air Temperature (Discharge Side)	°C DB / WB	29.1/23.9	
4.09	Leaving Air Flow Rates	L/s	2670	

Air Handling Units Data Sheet

ADMIN AIR HANDLING UNIT			
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Equipment Reference:	AHU02-O-01		

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ADMIN AIR HANDLING UNIT				
5.00	**Energy Recovery Winter Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
5.01	Energy Recovery Type	-	Enthalpy Wheel	
5.02	Total Heating Capacity	kW	28.3	
5.03	Effectiveness (Sensible/Latent)	%	68/85	
5.04	Intake Outdoor Air Temperature	°C DB / WB	5.0/1.3	
5.05	Intake Outdoor Air Flow Rates	L/s	3295	
5.06	Extract Return Air Temperature	°C DB / WB	18.2/12.6	
5.07	Leaving Air Temperature (Supply Side)	°C DB / WB	12.3/8.7	
5.08	Leaving Air Temperature (Discharge Side)	°C DB / WB	9.2/4.5	
5.09	Leaving Air Flow Rates	L/s	2670	
6.00	**Cooling Coil Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
6.01	Medium	-	Direct Expansion	
6.02	Total Cooling Capacity	kW	68.95	
6.03	Sensible Cooling Capacity	kW	53.34	
6.04	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.05	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.06	Entering Air Condition	°C DB / WB	28.2/20.5	
6.07	Leaving Air Condition	°C DB / WB	15.0/14.9	
6.08	Entering Fluid Temperature	°C	n/a	
6.09	Leaving Fluid Temperature	°C	n/a	
6.10	Chilled Water Flow Rate	L/s	n/a	
6.11	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
6.12	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
6.13	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
6.14	Type of Refrigerant	-	R32/ R134a/ R410a or approved equivalent	
6.15	Glycol %	%	n/a	
6.16	Condensate Flow Rate	L/s	Manufacturer to Advise >>	
6.17	Number of Rows	No.	Manufacturer to Advise >>	
6.18	Fin Spacing	mm	Manufacturer to Advise >>	
6.19	Eliminators	Y/N	Manufacturer to Advise >>	
7.00	**Heating Coil Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
7.01	Medium	-	Refrigerant	
7.02	Total Heating Capacity	kW	25.18	
7.03	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.04	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.05	Entering Air Condition	°C DB / WB	12.8/8.9	
7.06	Leaving Air Condition	°C DB / WB	19.0/11.6	
7.07	Entering Fluid Temperature	°C	n/a	
7.08	Leaving Fluid Temperature	°C	n/a	
7.09	LTHW Flow Rate	L/s	n/a	
7.10	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
7.11	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
7.12	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
7.13	Electrical Supply	V/Ø/Hz	400/3/50	
7.14	Maximum Electric Power	kW	Manufacturer to Advise >>	
7.15	Type of Refrigerant	-	Manufacturer to Advise >>	
7.16	Glycol %	%	n/a	
7.17	Number of Rows	No.	Manufacturer to Advise >>	
7.18	Fin Spacing	mm	Manufacturer to Advise >>	
8.00	**Condenser Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
8.01	Medium	-	R32/ R134a/ R410a or approved equivalent	
8.02	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
8.03	Maximum Electric Power	kW	Manufacturer to Advise >>	
8.04	Air-cooled/Water Cooled	-	Air-cooled	
8.05	Fan Motor (EC,AC..etc)	-	Manufacturer to Advise >>	
8.06	COP/EER	kW/kW	Manufacturer to Advise >>	
8.07	Vertical / Side Discharge		Manufacturer to Advise >>	

Air Handling Units Data Sheet

ADMIN AIR HANDLING UNIT			
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Equipment Reference:	AHU02-O-01		

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ADMIN AIR HANDLING UNIT				
9.00	**Supply Fan Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
9.01	Fan Type	-	Manufacturer to Advise >>	
9.02	Fan Quantity	No.	Manufacturer to Advise >>	
9.03	Motor Type	-	Manufacturer to Advise >>	
9.04	Design Flow Rate	L/s	3,295	
9.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
9.06	External Static Pressure	Pa	175	
9.07	Specific Fan Power	kW/(L/s)	0.0036	
9.08	Fan Speed	rpm	Manufacturer to Advise >>	
9.09	Electrical Supply	V/Ø/Hz	400/3/50	
9.10	Maximum Total Absorbed Electric Power	kW	11.86	
9.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	
10.00	**Extract Fan Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
10.01	Fan Type	-	Manufacturer to Advise >>	
10.02	Fan Quantity	No.	Manufacturer to Advise >>	
10.03	Motor Type	-	Manufacturer to Advise >>	
10.04	Design Flow Rate	L/s	2,670	
10.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
10.06	External Static Pressure	Pa	240	
10.07	Specific Fan Power	kW/(L/s)	0.0036	
10.08	Fan Speed	rpm	Manufacturer to Advise >>	
10.09	Electrical Supply	V/Ø/Hz	400/3/50	
10.10	Maximum Total Absorbed Electric Power	kW	9.61	
10.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	
11.00	**Humidifier Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Solid Air**
11.01	Humidifier Type	-	n/a	
11.02	Capacity	kg/hr	n/a	
11.03	Air Flow	L/s	n/a	
11.04	Entering Air Condition	°C DB / WB	n/a	
11.05	Leaving Air Condition	°C DB / WB	n/a	
11.06	Electrical Supply	V/Ø/Hz	n/a	
11.07	Maximum Electric Power	kW	n/a	
12.00	**Physical Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
12.01	Max. Overall Length	mm	Manufacturer to Advise >>	
12.02	Max. Overall Width	mm	Manufacturer to Advise >>	
12.03	Max. Overall Height	mm	Manufacturer to Advise >>	
12.04	Side Clearance Between Units	mm	Manufacturer to Advise >>	
12.05	Dry Weight	kg	Manufacturer to Advise >>	
12.06	Max. Operating Weight	kg	Manufacturer to Advise >>	
12.07	Indoor / External Installation		Manufacturer to Advise >>	
12.08	Doube Skin / Single Skin Construction		Manufacturer to Advise >>	
13.00	**Electrical Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
13.01	Main Power Supply	V/Ø/Hz	400/3/50	
13.02	Unit Maximum Absorbed Power - Summer	kW	Manufacturer to Advise >>	
13.03	Unit Maximum Absorbed Power - Winter	kW	Manufacturer to Advise >>	
13.04	Unit Maximum Running Current	A	Manufacturer to Advise >>	
13.05	Unit Maximum Starting Current	A	Manufacturer to Advise >>	
13.06	Unit Full Load Power Factor	-	Manufacturer to Advise >>	
13.07	Unit Full Load Corrected Power Factor	-	Manufacturer to Advise >>	
13.08	Recommended Main Supply Circuit Breaker Rating	A	Manufacturer to Advise >>	
13.09	Control Power Supply	V/Ø/Hz	Manufacturer to Advise >>	
13.10	Control Supply UPS Backed	-	Manufacturer to Advise >>	
13.11	Controls Panel	-	Manufacturer to Advise >>	
13.12	VFD Panel	-	Manufacturer to Advise >>	

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ADMIN AIR HANDLING UNIT

14.00 Noise and Vibration Data

Item	Description		B&W Specifies		Vendor	
14.01	Octave Band	Units	Max Sound Power	Max Sound Pressure 10m	Max Sound Power	Max Sound pressure 10m
14.02	63 Hz	dB				
14.03	125 Hz	dB				
14.04	250 Hz	dB				
14.05	500 Hz	dB				
14.06	1 kHz	dB				
14.07	2 kHz	dB				
14.08	4 kHz	dB				
14.09	8 kHz	dB				
14.10	A	dB				

15.00 Atmosphere Side (Intake and Discharge) Acoustic Performance Data

Item	Description		B&W Specifies				Vendor			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
15.01	Octave Band	Units	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge
15.02	63 Hz	dB								
15.03	125 Hz	dB								
15.04	250 Hz	dB								
15.05	500 Hz	dB								
15.06	1 kHz	dB								
15.07	2 kHz	dB								
15.08	4 kHz	dB								
15.09	8 kHz	dB								
15.10	A	dB								

16.00 Room Side (Supply and Extract) Acoustic Performance Data

Item	Description		B&W Specifies				Vendor			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
16.01	Octave Band	Units	Supply	Extract	Supply	Extract	Supply	Extract	Supply	Extract
16.02	63 Hz	dB								
16.03	125 Hz	dB								
16.04	250 Hz	dB								
16.05	500 Hz	dB								
16.06	1 kHz	dB								
16.07	2 kHz	dB								
16.08	4 kHz	dB								
16.09	8 kHz	dB								
16.10	A	dB								

17.00 Additional Features

Item	Description	Units	B&W Specifies	Vendor Proposes
17.01	Energy Metering	-	Required	
17.02	BMS Input and Output	-	Required	
17.03	Anti-vibration Mount	-	Required	
17.04	Smoke Detector	-	Required	
17.05	Droplet Eliminator	-	Required	
17.06	Casing Leakage Classification	-	n/a	
17.07	Casing Thermal Insulation Classification	-	n/a	
17.08	Casing Condensation Insulation Classification	-	n/a	
17.09	Casing Mechanical Strength	-	n/a	
17.10	Frame Material	-	n/a	
17.11	Coil Material	-	n/a	
17.12	HEPA Filters	-	n/a	
17.13	Ozone Generator	-	n/a	
17.14	Fire Rating / Operation in Smoke Mode	-	n/a	

18.00 Approved Manufacturers

Item	Description	Units	B&W Specifies	Vendor Proposes
18.01	Approved Manufacturers	-		

19.00 Notes

Item	Description
19.01	

Air Handling Units Data Sheet

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Equipment Reference:	AHU03-O-01		

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WC ADMIN AIR HANDLING UNIT				
1.00 Manufacturer's Details				
Item	**Description**	**Units**	**Vendor Specifies**	
1.01	Manufacturer's Name	-		
1.02	Manufacturer's Local Office Location	-		
1.03	Manufacturer's Global Head Office	-		
1.04	Location of Factory and Assembly of the AHU	-		
1.05	Location of Factory Acceptance Tests	-		
1.06	Manufacturer's Quotation Reference	-		
1.07	Manufacturer's Model Number	-		
1.08	Manufacturer's Model Data Sheet Reference	-		
2.00 Site Data				
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Complies**
2.01	Site Location	-	Vignate, Italy	
2.02	Equipment Location	-	Roof Level	
2.03	Area Served	-	Admin area	
2.04	Quantity	No.	1	
2.05	Site Altitude	m	121	
2.06	Ambient Conditions	°C DB / WB	ASHRAE 0.4% design conditions	
2.00 UNIT TYPE				
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Complies**
2.01	Installation Type (Ceiling Suspended , Floor Mounted...etc)	-	External Floor Mounted	
2.02	Cooling Medium (Chilled Water, Refrigerant DX..etc)		Refrigerant DX	
3.00 AHU Sections				
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
3.01	Intake Damper (Motorised)	-	Required	
3.02	Intake Acoustic Attenuator	-	Required, duct mounted type (external)	
3.03	Discharge Damper (Motorised)	-	Required	
3.04	Discharge Acoustic Attenuator	-	Required, duct mounted type (external)	
3.05	Frost Coil	-	Required	
3.06	Mixing Box	-	Not Required	
3.07	Panel Filter - M5	-	Required	
3.08	Carbon Filter - G612	-	Not Required	
3.09	Bag Filter - F7	-	Required (Plate heat exchanger)	
3.10	Energy Recovery	-	Not Required	
3.11	Energy Recovery Bypass	-	Not Required	
3.12	Heating Coil	-	DX cooling/heating coil	
3.13	Electric Heating Coil	-	Not Required	
3.14	Cooling Coil	-	DX cooling/heating coil	
3.15	Re-Heating Coil	-	Not Required	
3.16	Humidifier	-	Not Required	
3.17	Supply Fan	-	Required	
3.18	Extract Fan	-	Required	
3.19	Supply Damper (Motorised)	-	Required	
3.20	Supply Acoustic Attenuator	-	Required, duct mounted type (external)	
3.21	Supply Connection Section	-	Required	
3.22	Extract Damper (Motorised)	-	Required	
3.23	Extract Acoustic Attenuator	-	Required, duct mounted type (external)	
3.24	Extract Connection Section	-	Required	
4.00 Energy Recovery Summer Performance Data				
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
4.01	Energy Recovery Type	-	Plate Heat Exchanger	
4.02	Total Cooling Capacity	kW	1.56	
4.03	Effectiveness (Sensible)	%	69	
4.04	Intake Outdoor Air Temperature	°C DB / WB	31.2/25.2	
4.05	Intake Outdoor Air Flow Rates	L/s	275	
4.06	Extract Return Air Temperature	°C DB / WB	24.5/17.2	
4.07	Leaving Air Temperature (Supply Side)	°C DB / WB	26.6/24.0	
4.08	Leaving Air Temperature (Discharge Side)	°C DB / WB	28.1/18.4	
4.09	Leaving Air Flow Rates	L/s	355	

Air Handling Units Data Sheet

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WC ADMIN AIR HANDLING UNIT

5.00 Energy Recovery Winter Performance Data

Item	Description	Units	B&W Specifies	Vendor
5.01	Energy Recovery Type	-	Plate Heat Exchanger	
5.02	Total Heating Capacity	kW	3.38	
5.03	Effectiveness (Sensible/Latent)	%	69	
5.04	Intake Outdoor Air Temperature	°C DB / WB	5.0/1.3	
5.05	Intake Outdoor Air Flow Rates	L/s	275	
5.06	Extract Return Air Temperature	°C DB / WB	19.5/13.5	
5.07	Leaving Air Temperature (Supply Side)	°C DB / WB	15/6.6	
5.08	Leaving Air Temperature (Discharge Side)	°C DB / WB	11.7/10.4	
5.09	Leaving Air Flow Rates	L/s	355	

6.00 Cooling Coil Performance Data

Item	Description	Units	B&W Specifies	Vendor
6.01	Medium	-	Direct Expansion	
6.02	Total Cooling Capacity	kW	10.31	
6.03	Sensible Cooling Capacity	kW	4.09	
6.04	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.05	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.06	Entering Air Condition	°C DB / WB	27.1/24.1	
6.07	Leaving Air Condition	°C DB / WB	15.0/14.9	
6.08	Entering Fluid Temperature	°C	n/a	
6.09	Leaving Fluid Temperature	°C	n/a	
6.10	Chilled Water Flow Rate	L/s	n/a	
6.11	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
6.12	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
6.13	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
6.14	Type of Refrigerant	-	R32/ R134a/ R410a or approved equivalent	
6.15	Glycol %	%	n/a	
6.16	Condensate Flow Rate	L/s	Manufacturer to Advise >>	
6.17	Number of Rows	No.	Manufacturer to Advise >>	
6.18	Fin Spacing	mm	Manufacturer to Advise >>	
6.19	Eliminators	Y/N	Manufacturer to Advise >>	

7.00 Heating Coil Performance Data

Item	Description	Units	B&W Specifies	Vendor
7.01	Medium	-	Refrigerant	
7.02	Total Heating Capacity	kW	1.18	
7.03	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.04	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.05	Entering Air Condition	°C DB / WB	15.5/6.9	
7.06	Leaving Air Condition	°C DB / WB	19.0/8.5	
7.07	Entering Fluid Temperature	°C	n/a	
7.08	Leaving Fluid Temperature	°C	n/a	
7.09	LTHW Flow Rate	L/s	n/a	
7.10	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
7.11	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
7.12	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
7.13	Electrical Supply	V/Ø/Hz	400/3/50	
7.14	Maximum Electric Power	kW	Manufacturer to Advise >>	
7.15	Type of Refrigerant	-	Manufacturer to Advise >>	
7.16	Glycol %	%	n/a	
7.17	Number of Rows	No.	Manufacturer to Advise >>	
7.18	Fin Spacing	mm	Manufacturer to Advise >>	

8.00 Condenser Performance Data

Item	Description	Units	B&W Specifies	Vendor
8.01	Medium	-	R32/ R134a/ R410a or approved equivalent	
8.02	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
8.03	Maximum Electric Power	kW	Manufacturer to Advise >>	
8.04	Air-cooled/Water Cooled	-	Air-cooled	
8.05	Fan Motor (EC,AC..etc)	-	Manufacturer to Advise >>	
8.06	COP/EER	kW/kW	Manufacturer to Advise >>	
8.07	Vertical / Side Discharge		Manufacturer to Advise >>	

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WC ADMIN AIR HANDLING UNIT

9.00 Supply Fan Performance Data

Item	Description	Units	B&W Specifies	Vendor
9.01	Fan Type	-	Manufacturer to Advise >>	
9.02	Fan Quantity	No.	Manufacturer to Advise >>	
9.03	Motor Type	-	Manufacturer to Advise >>	
9.04	Design Flow Rate	L/s	275	
9.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
9.06	External Static Pressure	Pa	160	
9.07	Specific Fan Power	kW/(L/s)	0.0036	
9.08	Fan Speed	rpm	Manufacturer to Advise >>	
9.09	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
9.10	Maximum Total Absorbed Electric Power	kW	0.99	
9.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	

10.00 Extract Fan Performance Data

Item	Description	Units	B&W Specifies	Vendor
10.01	Fan Type	-	Manufacturer to Advise >>	
10.02	Fan Quantity	No.	Manufacturer to Advise >>	
10.03	Motor Type	-	Manufacturer to Advise >>	
10.04	Design Flow Rate	L/s	355	
10.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
10.06	External Static Pressure	Pa	200	
10.07	Specific Fan Power	kW/(L/s)	0.0036	
10.08	Fan Speed	rpm	Manufacturer to Advise >>	
10.09	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
10.10	Maximum Total Absorbed Electric Power	kW	1.28	
10.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	

11.00 Humidifier Performance Data

Item	Description	Units	B&W Specifies	Solid Air
11.01	Humidifier Type	-	n/a	
11.02	Capacity	kg/hr	n/a	
11.03	Air Flow	L/s	n/a	
11.04	Entering Air Condition	°C DB / WB	n/a	
11.05	Leaving Air Condition	°C DB / WB	n/a	
11.06	Electrical Supply	V/Ø/Hz	n/a	
11.07	Maximum Electric Power	kW	n/a	

12.00 Physical Data

Item	Description	Units	B&W Specifies	Vendor
12.01	Max. Overall Length	mm	Manufacturer to Advise >>	
12.02	Max. Overall Width	mm	Manufacturer to Advise >>	
12.03	Max. Overall Height	mm	Manufacturer to Advise >>	
12.04	Side Clearance Between Units	mm	Manufacturer to Advise >>	
12.05	Dry Weight	kg	Manufacturer to Advise >>	
12.06	Max. Operating Weight	kg	Manufacturer to Advise >>	
12.07	Indoor / External Installation		Manufacturer to Advise >>	
12.08	Doube Skin / Single Skin Construction		Manufacturer to Advise >>	

13.00 Electrical Data

Item	Description	Units	B&W Specifies	Vendor
13.01	Main Power Supply	V/Ø/Hz	400/3/50	
13.02	Unit Maximum Absorbed Power - Summer	kW	Manufacturer to Advise >>	
13.03	Unit Maximum Absorbed Power - Winter	kW	Manufacturer to Advise >>	
13.04	Unit Maximum Running Current	A	Manufacturer to Advise >>	
13.05	Unit Maximum Starting Current	A	Manufacturer to Advise >>	
13.06	Unit Full Load Power Factor	-	Manufacturer to Advise >>	
13.07	Unit Full Load Corrected Power Factor	-	Manufacturer to Advise >>	
13.08	Recommended Main Supply Circuit Breaker Rating	A	Manufacturer to Advise >>	
13.09	Control Power Supply	V/Ø/Hz	Manufacturer to Advise >>	
13.10	Control Supply UPS Backed	-	Manufacturer to Advise >>	
13.11	Controls Panel	-	Manufacturer to Advise >>	
13.12	VFD Panel	-	Manufacturer to Advise >>	

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Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU03-O-01		

Lombardini22 DESIGN THINKING

Black&White

Revision History:

Revision:	-											
Date:	03/05/2024											
By:	JN											

WC ADMIN AIR HANDLING UNIT

14.00 Noise and Vibration Data

Item	Description		B&W Specifies		Vendor	
14.01	Octave Band	Units	Max Sound Power	Max Sound Pressure 10m	Max Sound Power	Max Sound pressure 10m
14.02	63 Hz	dB				
14.03	125 Hz	dB				
14.04	250 Hz	dB				
14.05	500 Hz	dB				
14.06	1 kHz	dB				
14.07	2 kHz	dB				
14.08	4 kHz	dB				
14.09	8 kHz	dB				
14.10	A	dB				

15.00 Atmosphere Side (Intake and Discharge) Acoustic Performance Data

Item	Description		B&W Specifies				Vendor			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
15.01	Octave Band	Units	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge
15.02	63 Hz	dB								
15.03	125 Hz	dB								
15.04	250 Hz	dB								
15.05	500 Hz	dB								
15.06	1 kHz	dB								
15.07	2 kHz	dB								
15.08	4 kHz	dB								
15.09	8 kHz	dB								
15.10	A	dB								

16.00 Room Side (Supply and Extract) Acoustic Performance Data

Item	Description		B&W Specifies				Vendor			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
16.01	Octave Band	Units	Supply	Extract	Supply	Extract	Supply	Extract	Supply	Extract
16.02	63 Hz	dB								
16.03	125 Hz	dB								
16.04	250 Hz	dB								
16.05	500 Hz	dB								
16.06	1 kHz	dB								
16.07	2 kHz	dB								
16.08	4 kHz	dB								
16.09	8 kHz	dB								
16.10	A	dB								

17.00 Additional Features

Item	Description	Units	B&W Specifies	Vendor Proposes
17.01	Energy Metering	-	Required	
17.02	BMS Input and Output	-	Required	
17.03	Anti-vibration Mount	-	Required	
17.04	Smoke Detector	-	Required	
17.05	Droplet Eliminator	-	Required	
17.06	Casing Leakage Classification	-	n/a	
17.07	Casing Thermal Insulation Classification	-	n/a	
17.08	Casing Condensation Insulation Classification	-	n/a	
17.09	Casing Mechanical Strength	-	n/a	
17.10	Frame Material	-	n/a	
17.11	Coil Material	-	n/a	
17.12	HEPA Filters	-	n/a	
17.13	Ozone Generator	-	n/a	
17.14	Fire Rating / Operation in Smoke Mode	-	n/a	

18.00 Approved Manufacturers

Item	Description	Units	B&W Specifies	Vendor Proposes
18.01	Approved Manufacturers	-		

19.00 Notes

Item	Description
19.01	

Air Handling Units Data Sheet

LOADING BAY AIR HANDLING UNIT			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU04-O-01		

Lombardini22 DESIGN THINKING

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Revision History:

Revision:	-											
Date:	03/05/2024											
By:	JN											

LOADING BAY AIR HANDLING UNIT				
1.00	**Manufacturer's Details**			
Item	**Description**	**Units**	**Vendor Specifies**	
1.01	Manufacturer's Name	-		
1.02	Manufacturer's Local Office Location	-		
1.03	Manufacturer's Global Head Office	-		
1.04	Location of Factory and Assembly of the AHU	-		
1.05	Location of Factory Acceptance Tests	-		
1.06	Manufacturer's Quotation Reference	-		
1.07	Manufacturer's Model Number	-		
1.08	Manufacturer's Model Data Sheet Reference	-		
2.00	**Site Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Complies**
2.01	Site Location	-	Vignate,Italy	
2.02	Equipment Location	-	Ground Floor	
2.03	Area Served	-	Loading bay	
2.04	Quantity	No.	1	
2.05	Site Altitude	m	121	
2.06	Ambient Conditions	°C DB / WB	ASHRAE 0.4% design conditions	
2.00	**UNIT TYPE**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Complies**
2.01	Installation Type (Ceiling Suspended , Floor Mounted...etc)	-	Ceiling Suspended	
2.02	Cooling Medium (Chilled Water, Refrigerant DX..etc)		Refrigerant DX	
3.00	**AHU Sections**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
3.01	Intake Damper (Motorised)	-	Required	
3.02	Intake Acoustic Attenuator	-	Required, duct mounted type (external)	
3.03	Discharge Damper (Motorised)	-	Required	
3.04	Discharge Acoustic Attenuator	-	Required, duct mounted type (external)	
3.05	Frost Coil	-	Required	
3.06	Mixing Box	-	Not Required	
3.07	Panel Filter - M5	-	Required	
3.08	Carbon Filter - G612	-	Not Required	
3.09	Bag Filter - F7	-	Required	
3.10	Energy Recovery	-	Required (Plate heat exchanger)	
3.11	Energy Recovery Bypass	-	Not Required	
3.12	Heating Coil	-	DX cooling/heating coil	
3.13	Electric Heating Coil	-	Not Required	
3.14	Cooling Coil	-	DX cooling/heating coil	
3.15	Re-Heating Coil	-	Not Required	
3.16	Humidifier	-	Not Required	
3.17	Supply Fan	-	Required	
3.18	Extract Fan	-	Required	
3.19	Supply Damper (Motorised)	-	Required	
3.20	Supply Acoustic Attenuator	-	Required, duct mounted type (external)	
3.21	Supply Connection Section	-	Required	
3.22	Extract Damper (Motorised)	-	Required	
3.23	Extract Acoustic Attenuator	-	Required, duct mounted type (external)	
3.24	Extract Connection Section	-	Required	
4.00	**Energy Recovery Summer Performance Data**			
Item	**Description**	**Units**	**B&W Specifies**	**Vendor**
4.01	Energy Recovery Type	-	Plate Heat Exchanger	
4.02	Total Cooling Capacity	kW	1.22	
4.03	Effectiveness (Sensible)	%	69	
4.04	Intake Outdoor Air Temperature	°C DB / WB	31.2/25.2	
4.05	Intake Outdoor Air Flow Rates	L/s	215	
4.06	Extract Return Air Temperature	°C DB / WB	24.5/17.2	
4.07	Leaving Air Temperature (Supply Side)	°C DB / WB	26.6/24.0	
4.08	Leaving Air Temperature (Discharge Side)	°C DB / WB	29..1/18.7	
4.09	Leaving Air Flow Rates	L/s	215	

Air Handling Units Data Sheet

LOADING BAY AIR HANDLING UNIT			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU04-O-01		

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Revision History:

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Date:	03/05/2024											
By:	JN											

LOADING BAY AIR HANDLING UNIT

5.00 Energy Recovery Winter Performance Data

Item	Description	Units	B&W Specifies	Vendor
5.01	Energy Recovery Type	-	Plate Heat Exchanger	
5.02	Total Heating Capacity	kW	2.65	
5.03	Effectiveness (Sensible/Latent)	%	69	
5.04	Intake Outdoor Air Temperature	°C DB / WB	5.0/1.3	
5.05	Intake Outdoor Air Flow Rates	L/s	215	
5.06	Extract Return Air Temperature	°C DB / WB	19.5/13.5	
5.07	Leaving Air Temperature (Supply Side)	°C DB / WB	15.0/6.6	
5.08	Leaving Air Temperature (Discharge Side)	°C DB / WB	5.0/1.3	
5.09	Leaving Air Flow Rates	L/s	215	

6.00 Cooling Coil Performance Data

Item	Description	Units	B&W Specifies	Vendor
6.01	Medium	-	Direct Expansion	
6.02	Total Cooling Capacity	kW	8.05	
6.03	Sensible Cooling Capacity	kW	3.19	
6.04	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.05	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
6.06	Entering Air Condition	°C DB / WB	27.1/24.1	
6.07	Leaving Air Condition	°C DB / WB	15.0/14.9	
6.08	Entering Fluid Temperature	°C	n/a	
6.09	Leaving Fluid Temperature	°C	n/a	
6.10	Chilled Water Flow Rate	L/s	n/a	
6.11	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
6.12	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
6.13	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
6.14	Type of Refrigerant	-	R32/ R134a/ R410a or approved equivalent	
6.15	Glycol %	%	n/a	
6.16	Condensate Flow Rate	l/s	Manufacturer to Advise >>	
6.17	Number of Rows	No.	Manufacturer to Advise >>	
6.18	Fin Spacing	mm	Manufacturer to Advise >>	
6.19	Eliminators	Y/N	Manufacturer to Advise >>	

7.00 Heating Coil Performance Data

Item	Description	Units	B&W Specifies	Vendor
7.01	Medium	-	Refrigerant	
7.02	Total Heating Capacity	kW	0.92	
7.03	Max. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.04	Min. Coil Face Velocity	m/s	Manufacturer to Advise >>	
7.05	Entering Air Condition	°C DB / WB	15.5/6.9	
7.06	Leaving Air Condition	°C DB / WB	19.0/8.5	
7.07	Entering Fluid Temperature	°C	n/a	
7.08	Leaving Fluid Temperature	°C	n/a	
7.09	LTHW Flow Rate	L/s	n/a	
7.10	Air Side Pressure Drop	Pa	Manufacturer to Advise >>	
7.11	Water Side Pressure Drop	kPa	Manufacturer to Advise >>	
7.12	Refrigerant Circuits Quantity	No.	Manufacturer to Advise >>	
7.13	Electrical Supply	V/Ø/Hz	400/3/50	
7.14	Maximum Electric Power	kW	Manufacturer to Advise >>	
7.15	Type of Refrigerant	-	Manufacturer to Advise >>	
7.16	Glycol %	%	n/a	
7.17	Number of Rows	No.	Manufacturer to Advise >>	
7.18	Fin Spacing	mm	Manufacturer to Advise >>	

8.00 Condenser Performance Data

Item	Description	Units	B&W Specifies	Vendor
8.01	Medium	-	R32/ R134a/ R410a or approved equivalent	
8.02	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
8.03	Maximum Electric Power	kW	Manufacturer to Advise >>	
8.04	Air-cooled/Water Cooled	-	Air-cooled	
8.05	Fan Motor (EC,AC..etc)	-	Manufacturer to Advise >>	
8.06	COP/EER	kW/kW	Manufacturer to Advise >>	
8.07	Vertical / Side Discharge		Manufacturer to Advise >>	

Air Handling Units Data Sheet

LOADING BAY AIR HANDLING UNIT			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU04-O-01		

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Revision History:

Revision:	-											
Date:	03/05/2024											
By:	JN											

LOADING BAY AIR HANDLING UNIT

9.00 Supply Fan Performance Data

Item	Description	Units	B&W Specifies	Vendor
9.01	Fan Type	-	Manufacturer to Advise >>	
9.02	Fan Quantity	No.	Manufacturer to Advise >>	
9.03	Motor Type	-	Manufacturer to Advise >>	
9.04	Design Flow Rate	L/s	215	
9.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
9.06	External Static Pressure	Pa	100	
9.07	Specific Fan Power	kW/(L/s)	0.002	
9.08	Fan Speed	rpm	Manufacturer to Advise >>	
9.09	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
9.10	Maximum Total Absorbed Electric Power	kW	0.43	
9.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	

10.00 Extract Fan Performance Data

Item	Description	Units	B&W Specifies	Vendor
10.01	Fan Type	-	Manufacturer to Advise >>	
10.02	Fan Quantity	No.	Manufacturer to Advise >>	
10.03	Motor Type	-	Manufacturer to Advise >>	
10.04	Design Flow Rate	L/s	215	
10.05	Minimum Fan Total Efficiency	%	Manufacturer to Advise >>	
10.06	External Static Pressure	Pa	100	
10.07	Specific Fan Power	kW/(L/s)	0.002	
10.08	Fan Speed	rpm	Manufacturer to Advise >>	
10.09	Electrical Supply	V/Ø/Hz	Manufacturer to Advise >>	
10.10	Maximum Total Absorbed Electric Power	kW	0.43	
10.11	Motor Efficiency Class	Class	Manufacturer to Advise >>	

11.00 Humidifier Performance Data

Item	Description	Units	B&W Specifies	Solid Air
11.01	Humidifier Type	-	n/a	
11.02	Capacity	kg/hr	n/a	
11.03	Air Flow	L/s	n/a	
11.04	Entering Air Condition	°C DB / WB	n/a	
11.05	Leaving Air Condition	°C DB / WB	n/a	
11.06	Electrical Supply	V/Ø/Hz	n/a	
11.07	Maximum Electric Power	kW	n/a	

12.00 Physical Data

Item	Description	Units	B&W Specifies	Vendor
12.01	Max. Overall Length	mm	Manufacturer to Advise >>	
12.02	Max. Overall Width	mm	Manufacturer to Advise >>	
12.03	Max. Overall Height	mm	Manufacturer to Advise >>	
12.04	Side Clearance Between Units	mm	Manufacturer to Advise >>	
12.05	Dry Weight	kg	Manufacturer to Advise >>	
12.06	Max. Operating Weight	kg	Manufacturer to Advise >>	
12.07	Indoor / External Installation		Manufacturer to Advise >>	
12.08	Doube Skin / Single Skin Construction		Manufacturer to Advise >>	

13.00 Electrical Data

Item	Description	Units	B&W Specifies	Vendor
13.01	Main Power Supply	V/Ø/Hz	Manufacturer to Advise >>	
13.02	Unit Maximum Absorbed Power - Summer	kW	Manufacturer to Advise >>	
13.03	Unit Maximum Absorbed Power - Winter	kW	Manufacturer to Advise >>	
13.04	Unit Maximum Running Current	A	Manufacturer to Advise >>	
13.05	Unit Maximum Starting Current	A	Manufacturer to Advise >>	
13.06	Unit Full Load Power Factor	-	Manufacturer to Advise >>	
13.07	Unit Full Load Corrected Power Factor	-	Manufacturer to Advise >>	
13.08	Recommended Main Supply Circuit Breaker Rating	A	Manufacturer to Advise >>	
13.09	Control Power Supply	V/Ø/Hz	Manufacturer to Advise >>	
13.10	Control Supply UPS Backed	-	Manufacturer to Advise >>	
13.11	Controls Panel	-	Manufacturer to Advise >>	
13.12	VFD Panel	-	Manufacturer to Advise >>	

Air Handling Units Data Sheet

LOADING BAY AIR HANDLING UNIT			
Project Title	MIL05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	AHU04-O-01		

Revision History:

Revision:	-											
Date:	03/05/2024											
By:	JN											

LOADING BAY AIR HANDLING UNIT

14.00 Noise and Vibration Data

Item	Description		B&W Specifies		Vendor	
14.01	Octave Band	Units	Max Sound Power	Max Sound Pressure 10m	Max Sound Power	Max Sound pressure 10m
14.02	63 Hz	dB				
14.03	125 Hz	dB				
14.04	250 Hz	dB				
14.05	500 Hz	dB				
14.06	1 kHz	dB				
14.07	2 kHz	dB				
14.08	4 kHz	dB				
14.09	8 kHz	dB				
14.10	A	dB				

15.00 Atmosphere Side (Intake and Discharge) Acoustic Performance Data

Item	Description		B&W Specifies				Vendor			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
15.01	Octave Band	Units	Intake	Discharge	Intake	Discharge	Intake	Discharge	Intake	Discharge
15.02	63 Hz	dB								
15.03	125 Hz	dB								
15.04	250 Hz	dB								
15.05	500 Hz	dB								
15.06	1 kHz	dB								
15.07	2 kHz	dB								
15.08	4 kHz	dB								
15.09	8 kHz	dB								
15.10	A	dB								

16.00 Room Side (Supply and Extract) Acoustic Performance Data

Item	Description		B&W Specifies				Vendor			
			Max Sound Power		Max Sound Pressure 10m		Max Sound Power		Max Sound Pressure 10m	
16.01	Octave Band	Units	Supply	Extract	Supply	Extract	Supply	Extract	Supply	Extract
16.02	63 Hz	dB								
16.03	125 Hz	dB								
16.04	250 Hz	dB								
16.05	500 Hz	dB								
16.06	1 kHz	dB								
16.07	2 kHz	dB								
16.08	4 kHz	dB								
16.09	8 kHz	dB								
16.10	A	dB								

17.00 Additional Features

Item	Description	Units	B&W Specifies	Vendor Proposes
17.01	Energy Metering	-	Required	
17.02	BMS Input and Output	-	Required	
17.03	Anti-vibration Mount	-	Required	
17.04	Smoke Detector	-	Required	
17.05	Droplet Eliminator	-	Required	
17.06	Casing Leakage Classification	-	n/a	
17.07	Casing Thermal Insulation Classification	-	n/a	
17.08	Casing Condensation Insulation Classification	-	n/a	
17.09	Casing Mechanical Strength	-	n/a	
17.10	Frame Material	-	n/a	
17.11	Coil Material	-	n/a	
17.12	HEPA Filters	-	n/a	
17.13	Ozone Generator	-	n/a	
17.14	Fire Rating / Operation in Smoke Mode	-	n/a	

18.00 Approved Manufacturers

Item	Description	Units	B&W Specifies	Vendor Proposes
18.01	Approved Manufacturers	-		

19.00 Notes

Item	Description
19.01	

MECHANICAL EQUIPMENT SCHEDULE

VRF System			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

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Revision:	-																
Date:	03/05/2024																
By:	NC																

Ref No	Room Served	Floor	Quantity	Status	Area	Type	Indoor Unit Data											Branch Controller Data								Outdoor Unit Data											Remarks
							Cooling Setpoint Temp.	Heating Setpoint Temp.	Total Cooling (Design)	Sensible Cooling (Design)	Total Heating	Fan Data		Power Input	Dimensions			Mass	Ref No	Total Cooling (Design)	Total Heating	Number of Branch	Dimensions			Electrical Data	Ref No	Quantity	Status	Type	Total Cooling	Total Heating	Ambient		Power Input	Electrical Data	COP	
												External static pressure	Flow rate		Width	Depth	Height														Summer	Winter				
							°C	°C	kW	kW	kW	Pa	l/s	W	mm	mm	mm	kg		kW	kW		mm	mm	mm	[Ø/ V/ Hz]					kW	kW	°CDB/°CWB	°C	kW	[Ø/ V/ Hz]		
FC03-O-04/05	Loading Bay	GF	2	Duty	Admin	Ducted	24.0	20.0	3.78	2.49	2.91	150	250	0.087	700	800	245	28.5	BCB01-O-01	46.14	15.83	4	580	480	298	1/230/60	VRF01-O-01	1	Duty	Scroll	85.36	29.63	33.7/23.8	-4	24	3/400/50	3.59	
FC02-O-01	Receiving Staging Area	GF	1	Duty	Admin	Ducted	24.0	20.0	3.14	2.00	1.45	150	158	0.045	550	800	245	24																			
FC02-O-02	Asset Management Office	GF	1	Duty	Admin	Ducted	24.0	20.0	2.97	2.44	0.79	150	158	0.045	550	800	245	24																			
FC01-O-01	Secure Storage	GF	1	Duty	Admin	Ducted	27.0	10.0	0.43	0.38	0.00	150	145	0.041	550	800	245	23.5																			
FC01-O-02	Corridor	GF	1	Duty	Admin	Ducted	24.0	20.0	1.44	1.44	1.12	150	145	0.041	550	800	245	23.5																			
FC04-O-01	Tenant Office	GF	1	Duty	Admin	Ducted	24.0	20.0	4.67	4.16	0.61	150	253	0.089	700	800	245	29																			
FC10-O-01	Corridor	GF	1	Duty	Admin	Cassette	24.0	20.0	0.96	0.96	0.63	n/a	142	0.018	575	575	260	2.7																			
FC03-O-01	Tenant Office	GF	1	Duty	Admin	Ducted	24.0	20.0	4.15	3.20	0.71	150	250	0.087	700	800	245	28.5																			
FC05-O-01	Lobby	GF	1	Duty	Admin	Ducted	24.0	20.0	5.87	4.06	1.28	150	350	0.101	1000	800	245	35.5																			
FC03-O-02	SOC Office	GF	1	Duty	Admin	Ducted	22.0	20.0	4.07	3.06	1.02	150	250	0.087	700	800	245	28.5																			
FC02-O-03	Tenant Office	GF	1	Duty	Admin	Ducted	24.0	20.0	3.12	2.76	0.54	150	158	0.045	550	800	245	24																			
FC13-O-01	Bathrooms	GF	1	Duty	Admin	Cassette	24.0	20.0	2.95	1.60	0.81	n/a	167	0.019	575	575	260	2.7																			
FC11-O-01	Toilet Corridor	GF	1	Duty	Admin	Cassette	24.0	20.0	1.77	0.52	0.27	n/a	145	0.018	575	575	260	2.7																			
FC13-O-02	Bathrooms	GF	1	Duty	Admin	Cassette	24.0	20.0	3.06	1.70	0.78	n/a	167	0.019	575	575	260	2.7																			
FC10-O-02	Corridor	GF	1	Duty	Admin	Cassette	24.0	20.0	1.03	1.03	0.75	n/a	142	0.018	575	575	260	2.7																			
FC10-O-03	Corridor	GF	1	Duty	Admin	Cassette	24.0	20.0	1.22	1.22	1.03	n/a	142	0.018	575	575	260	2.7	BCB02-O-01	39.22	13.80	4	580	480	298	1/230/60												
FC09-O-01/02/03	Tenant Office	GF	3	Duty	Admin	Ducted	24.0	20.0	12.32	10.54	4.01	150	650	0.247	1550	800	245	51																			
FC07-O-01/02	FOC	FF	2	Duty	Admin	Ducted	26.0	20.0	10.10	8.11	4.39	150	533	0.173	1400	800	245	46																			
FC12-O-01	Meeting Room	FF	1	Duty	Admin	Cassette	22.0	20.0	2.73	2.13	1.08	n/a	150	0.020	575	575	260	2.7																			
FC11-O-02	Visitor Room	FF	1	Duty	Admin	Cassette	22.0	20.0	1.93	1.57	0.89	n/a	145	0.018	575	575	260	2.7																			
FC11-O-03	Assistant Critical Facilities Manager	FF	1	Duty	Admin	Cassette	22.0	20.0	1.97	1.62	0.97	n/a	145	0.018	575	575	260	2.7																			
FC14-O-01	Critical Facilities Manager	FF	1	Duty	Admin	Cassette	22.0	20.0	5.41	4.98	1.91	n/a	242	0.048	575	575	260	2.7																			
FC10-O-04/05	Corridor	FF	2	Duty	Admin	Cassette	24.0	20.0	0.92	0.92	0.48	n/a	142	0.018	575	575	260	2.7	BCB03-O-01	61.15	15.80	6	580	480	298	1/230/60	VRF02-O-01	1	Duty	Scroll	144.09	42.24	33.7/23.8	-4	41	3/400/50	3.54	
FC05-O-02	Tenant Office	FF	1	Duty	Admin	Ducted	24.0	20.0	5.90	5.07	1.55	150	350	0.101	1000	800	245	35.5																			
FC03-O-03	Tenant Office	FF	1	Duty	Admin	Ducted	24.0	20.0	4.22	3.82	0.72	150	250	0.087	700	800	245	28.5																			
FC07-O-03	Break Area	FF	1	Duty	Admin	Ducted	24.0	20.0	9.12	7.66	1.95	150	533	0.173	1400	800	245	46																			
FC11-O-04	Toilet Corridor	FF	1	Duty	Admin	Cassette	24.0	20.0	1.78	0.58	0.27	n/a	145	0.018	575	575	260	2.7																			
FC13-O-03	Bathrooms	FF	1	Duty	Admin	Cassette	24.0	20.0	2.95	1.60	0.74	n/a	167	0.019	575	575	260	2.7																			
FC13-O-04	Bathrooms	FF	1	Duty	Admin	Cassette	24.0	20.0	3.09	1.74	0.85	n/a	167	0.019	575	575	260	2.7																			
FC10-O-06/07	Corridor	FF	2	Duty	Admin	Cassette	24.0	20.0	0.84	0.84	0.41	n/a	142	0.018	575	575	260	2.7																			
FC04-O-02	Tenant Office	FF	1	Duty	Admin	Ducted	24.0	20.0	5.23	4.72	0.82	150	253	0.089	700	800	245	29																			
FC10-O-08/09	Corridor	FF	2	Duty	Admin	Cassette	24.0	20.0	0.88	0.88	0.45	n/a	142	0.018	575	575	260	2.7	BCB04-O-01	82.94	26.44	6	580	480	298	1/230/60												
FC09-O-04/05/06/07/08	Tenant Office	FF	5	Duty	Admin	Ducted	24.0	20.0	14.86	12.85	4.78	150	650	0.247	1550	800	245	51																			
FC08-O-01/02	PV Equipment Room	GF	2	Duty/ Standby	Admin	Ducted	25.0	5.0	6.63	6.63	TBC	150	600	0.237	1400	800	245	47	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC01-O-03/04	Electrical Room	GF	2	Duty/ Standby	Admin	Ducted	24.0	5.0	0.31	0.31	TBC	150	145	0.041	550	800	245	23.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC12-O-02/03	Emergency Management Room	FF	2	Duty/ Standby	Admin	Cassette	24.0	5.0	1.26	1.26	TBC	n/a	150	0.020	575	575	260	2.7	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC08-O-03/04	Technical Room	FF	2	Duty/ Standby	Admin	Ducted	24.0	5.0	6.25	6.25	TBC	150	600	0.237	1400	800	245	47	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF03-O-01/02	2	Duty/ Standby	Scroll	66.29	TBC	37.9/28.7	-10.1	19	3/400/50	3.57	
FC08-O-05/06	PV Equipment Room	FF	2	Duty/ Standby	Admin	Ducted	25.0	5.0	6.76	6.76	TBC	150	600	0.237	1400	800	245	47	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC07-O-04/05	CPSS	GF	2	Duty/ Standby	Admin	Ducted	24.0	5.0	5.60	5.60	TBC	150	533	0.173	1400	800	245	46	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC08-O-07/08	Technical Room	FF	2	Duty/ Standby	Admin	Ducted	24.0	5.0	6.33	6.33	TBC	150	600	0.237	1400	800	245	47	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-01	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	7.63	7.63	3.46	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-02	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	7.63	7.63	3.46	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF04-O-01	1	Duty	Scroll	22.89	10.38	37.9/28.7	-10.1	6	3/400/50	3.69	
FC06-O-03	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	7.63	7.63	3.46	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC05-O-03	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	5.59	5.59	2.96	150	350	0.101	1000	800	245	35.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC05-O-04	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	5.59	5.59	2.96	150	350	0.101	1000	800	245	35.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF05-O-01	1	Duty	Scroll	16.76	8.87	37.9/28.8	-9.1	5	3/400/50	3.69	
FC05-O-05	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	5.59	5.59	2.96	150	350	0.101	1000	800	245	35.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-04	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	6.26	6.26	2.85	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-05	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	6.26	6.26	2.85	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF06-O-01	1	Duty	Scroll	18.78	8.54	37.9/28.9	-8.1	5	3/400/50	3.69	
FC06-O-06	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	6.26	6.26	2.85	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-07	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	6.21	6.21	3.46	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-08	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	6.21	6.21	3.46	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF07-O-01	1	Duty	Scroll	18.62	10.37	37.9/28.10	-7.1	5	3/400/50	3.69	
FC06-O-09	DH Corridor	GF	1	Duty	Data Hall	Ducted	24.0	20.0	6.21	6.21	3.46	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-10	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	7.52	7.52	2.29	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-11	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	7.52	7.52	2.29	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF08-O-01	1	Duty	Scroll	22.56	6.88	37.9/28.11	-6.1	6	3/400/50	3.69	
FC06-O-12	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	7.52	7.52	2.29	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC05-O-06	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	5.20	5.20	1.99	150	350	0.101	1000	800	245	35.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC05-O-07	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	5.20	5.20	1.99	150	350	0.101	1000	800	245	35.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF09-O-01	1	Duty	Scroll	15.59	5.96	37.9/28.12	-5.1	4	3/400/50	3.69	
FC05-O-08	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	5.20	5.20	1.99	150	350	0.101	1000	800	245	35.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-13	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	6.31	6.31	1.86	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-14	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	6.31	6.31	1.86	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF10-O-01	1	Duty	Scroll	18.92	5.57	37.9/28.13	-4.1	5	3/400/50	3.69	
FC06-O-15	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	6.31	6.31	1.86	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-16	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	6.18	6.18	2.25	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											
FC06-O-17	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	6.18	6.18	2.25	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	VRF11-O-01	1	Duty	Scroll	18.53	6.75	37.9/28.14	-3.1	5	3/400/50	3.69	
FC06-O-18	DH Corridor	FF	1	Duty	Data Hall	Ducted	24.0	20.0	6.18	6.18	2.25	150	383	0.135	1000	800	245	36.5	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC											

Additional Information

1. This datasheet shall be read in conjunction with all other datasheets, drawings and Employer's Requirements.
2. Indoor units shall have EC motors and shall be selected at medium speed
3. Maximum refrigerant line length shall be per manufacturers recommendation
4. Temperature control shall be as indicated in controls documentation.
5. Each indoor units shall be provided with digital controller and thermostat monitored by general control system
6. Indoor unit to be provided with wall mounted controller. Finish shall match interior design intent.
7. If required, Condensate lift pumps to be provided to where necessary - This will apply to most wall mounted units - Gravity drainage to be provided where possible. final condensate locations will depend on finalised FCU selections and site conditions.
8. Master controller linked to all units to be provided
9. VRF controls to comply with BMS points.
10. VRF/DX system installation shall include complete system, refrigeration pipework, supports and fixing, and control power cable tray
11. Electrcial data is indicative and shall be verified by the Contractor at Detailed Design based on final equipment selections.
12. External units shall be weather proof and double skinned.
13. Sound pressure at 1 m from the external unit shall not exceed 75dB or as required by Acoustic Specialist.
14. External static pressure values are estimated, full calculations shall be carried out by contractor to verify final ESP as per actual installations and site conditions.
15. Branch Controller and Equipment Selection is indicative and subject to Manufacturer verification.
16. All units shall be of heat pump type to provide heating and cooling.

EQUIPMENT SCHEDULE

AIR TERMINAL			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/24
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Black&White

Revision History:

Revision:	-															
Date:	03/05/2024															
By:	JN/MT															

Reference	Area Served	QTY	Type	Airflow	Nominal Size	Neck Size	Throw	Max. Pressure Drop	Sound Rating		Remarks / Comments
				L/s	mm	mm	mm	Pa	NR	dB	
4 Way Diffusers											
SAD01-XX	Refer to Plans	3	Square Ceiling Diffuser	50	300x300	ø200	-	21		22	
SAD02-XX	Refer to Schematic Drawings	7	Fixed Blade Swirl Diffuser	40	ø200	ø200		38		39	
SAD03-XX	Refer to Plans	19	Square Ceiling Diffuser	90	400x400	ø200	-	23		24	
SAD04-XX	Refer to Plans	48	Square Ceiling Diffuser	180	500x500	ø200	-	34		33	
RAD01-XX	Refer to Plans	3	Square Ceiling Diffuser	50	300X300	ø200	-	21		22	
RAD02-XX	Refer to Plans	19	Square Ceiling Diffuser	90	400x400	ø200	-	23		24	
RAD03-XX	Refer to Plans	48	Square Ceiling Diffuser	180	500x500	ø200	-	34		33	
Grilles											
SAG01-XX	Refer to Schematic Drawings	4	Supply Air Grille	300	700x300	350x300	-	<30	<40		
SAG02-XX	Refer to Schematic Drawings	3	Supply Air Grille	195	500x300	300x250	-	<30	<40		
SAG03-XX	Refer to Schematic Drawings	1	Supply Air Grille	85	400x150	200x150		<30	<40		
SAG04-XX	Refer to Schematic Drawings	1	Supply Air Grille	105	400x200	200x200		<30	<40		
SAG05-XX	Refer to Schematic Drawings	3	Supply Air Grille	175-180	400x300	250x250		<30	<40		
SAG06-XX	Refer to Schematic Drawings	1	Supply Air Grille	55	300x150	150x150		<30	<40		
SAG07-XX	Refer to Schematic Drawings	1	Supply Air Grille	130	600x150	150x150		<30	<40		
SAG08-XX	Refer to Schematic Drawings	1	Supply Air Grille	30	250x100	150x100		<30	<40		
SAG09-XX	Refer to Schematic Drawings	2	Supply Air Grille	105-110	300x300	250x250		<30	<40		
SAG10-XX	Refer to Schematic Drawings	1	Supply Air Grille	20	200x100	100x100		<30	<40		
EAG01-XX	Refer to Plans	1	Exhaust Air Grille	50	200x100	N/A		<30	<40		
EAG02-XX	Refer to Plans	2	Exhaust Air Grille	105	200x200	N/A		<30	<40		

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EQUIPMENT SCHEDULE

AIR TERMINAL			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/24
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

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Revision History:

Revision:	-															
Date:	03/05/2024															
By:	JN/MT															

Reference	Area Served	QTY	Type	Airflow	Nominal Size	Neck Size	Throw	Max. Pressure Drop	Sound Rating		Remarks / Comments
				L/s	mm	mm	mm	Pa	NR	dB	
SIAG01-XX	Refer to Schematic Drawings	11	Smoke Intake Air Grille	394-410	900x300	900x300		<15	<40		
SIAG02-XX	Refer to Schematic Drawings	2	Smoke Intake Air Grille	495	800x400	800x400		<15	<40		
SIAG03-XX	Refer to Schematic Drawings	1	Smoke Intake Air Grille	520	900x400	900x400	-	<15	<40		
SIAG04-XX	Refer to Schematic Drawings	2	Smoke Intake Air Grille	320	700x300	700x300		<15	<40		
SIAG05-XX	Refer to Schematic Drawings	2	Smoke Intake Air Grille	435	1000x300	1000x300		<15	<40		
SIAG06-XX	Refer to Schematic Drawings	24	Smoke Intake Air Grille	2867	600x600	600x600		<15	<40		
SIAG07-XX	Refer to Schematic Drawings	12	Smoke Intake Air Grille	120	200x200	200x200		<15	<40		
SEAG01-XX	Refer to Schematic Drawings	1	Smoke Extract Air Grille	805	1000x500	1000x500		<15	<40		
SEAG02-XX	Refer to Schematic Drawings	2	Smoke Extract Air Grille	975	1000x600	1000x600		<15	<40		
SEAG03-XX	Refer to Schematic Drawings	2	Smoke Extract Air Grille	513	800x400	800x400		<15	<40		
SEAG04-XX	Refer to Schematic Drawings	10	Smoke Extract Air Grille	776	800x600	800x600		<15	<40		
SEAG05-XX	Refer to Schematic Drawings	2	Smoke Extract Air Grille	858	900x600	900x600		<15	<40		
SEAG06-XX	Refer to Schematic Drawings	2	Smoke Extract Air Grille	630	1000x400	1000x400		<15	<40		
SEAG07-XX	Refer to Schematic Drawings	24	Smoke Extract Air Grille	3750	1500x500	1500x500		<15	<40		
SEAG08-XX	Refer to Schematic Drawings	2	Smoke Extract Air Grille	705	400x350	400x350		<15	<40		
			Disc Valves								
RV01-XX	Toilet Area	12	Toilet Extract Disc Valve	1-15	ø165	ø125	-	<30	<20		
RV02-XX	Toilet Area	2	Toilet Extract Disc Valve	16-30	ø190	ø160	-	<45	<25		
RV03-XX	Toilet Area	3	Toilet Extract Disc Valve	31-40	ø240	ø200	-	<30	<20		

ADDITIONAL NOTES		
Item	**B&W Specifies**	**Vendor Proposes**
01	Manufacturer shall make selections for all grilles and diffusers showing all reference data (flow, throw, pressure loss, NC, etc.) for the Engineer's approval.	
02	Colour and finish shall be approved by architect/interior designer.	
03	This equipment schedule has been prepared for tender purpose only.	

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EQUIPMENT SCHEDULE

ATTENUATORS

Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-													
Date:	03/05/2024													
By:	MT/JN													

Reference	Location	NC Rating	Area Served	Type	Quantity	Air Flow Rate	Max Length	Width	Height / Diameter	Max Pressure Loss	Octave Band Dynamic Insertion Loss dB						
						L/s	mm	mm	mm	Pa	63	125	250	500	1k	2k	4k	8k
SIL01-01 to 16	AHU01-O-01 to 08	30	Refer to plans	TBC	16	825	1500	Manufacturer to Advise		20	Manufacturer to Advise						
SIL02-01 to 08	AHU01-O-01 to 08	30	Refer to plans	TBC	8	2,170	1500	Manufacturer to Advise		20	Manufacturer to Advise						
SIL03-01 to 08	AHU01-O-01 to 08	30	Refer to plans	TBC	8	1,345	1500	Manufacturer to Advise		20	Manufacturer to Advise						
SIL04-01 to 02	AHU02-O-01	30	Refer to plans	TBC	2	2,670	1500	Manufacturer to Advise		20	Manufacturer to Advise						
SIL05-01 to 02	AHU02-O-01	30	Refer to plans	TBC	2	3,295	1500	Manufacturer to Advise		20	Manufacturer to Advise						
SIL06-01 to 02	AHU03-O-01	30	Refer to plans	TBC	2	275	1500	Manufacturer to Advise		20	Manufacturer to Advise						
SIL07-01 to 02	AHU03-O-01	30	Refer to plans	TBC	2	355	1500	Manufacturer to Advise		20	Manufacturer to Advise						

ADDITIONAL NOTES

Item	B&W Specifies	Vendor Proposes
01	Schedule to be read in conjuction with Specifications, Data sheet, Layouts and Schematics.	
02	Contractor to confirm selected equipment inlet and outlet sound power levels and adjust attenuator insertion loss as necessary.	
03	Attenuators to be delivered to site with capped ends to prevent ingress of dirt prior to installation.	
04	Attenuators to be constructed from the same materials as ductwork system and have the same surface treatment as defined in the specifications.	
05	All flow rate is based on the maximum capacity of the ventilation equipment subject to final selection.	

MECHANICAL EQUIPMENT SCHEDULE

Heaters			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-					
Date:	03/05/2024					
By:	NC					

1.00	Manufacturer's Details	
Item	**Description**	**Vendor Specifies**
1.01	Manufacturer's Name	
1.02	Manufacturer's Local Office Location	
1.03	Manufacturer's Global Head Office	
1.04	Location of Factory	
1.05	Location of Factory Acceptance Tests	

2.00 Performance Data

Unit Ref.	Area Served		Type	Quantity	Output *kW*	V/Ph/Hz	Model
TH.A-00-01	Valve Room	**B&W Specifies**	Tubular Heater	1	2.0	230 / 1 / 50	
		Vendor Proposes					
TH.A-00-01	Sprinkler Pump Room	**B&W Specifies**	Tubular Heater	1	2.0	230 / 1 / 50	
		Vendor Proposes					
TH.A-00-01	Hydrant Pump Room	**B&W Specifies**	Tubular Heater	1	2.0	230 / 1 / 50	
		Vendor Proposes					

3.00	Additional Features	
Item	**B&W Specifies**	**Vendor Proposes**
3.01	Panel heaters shall be lot20 compliant c/w with onboard controls. Heater shall be complete with manufacturers wall fixing/mounting kit.	

4.00	Manufacturer's Details		
Item	**Description**	**B&W Specifies**	**Vendor Proposes**
4.01	Approved manufacturers	CFT or equal and approved.	

5.00 Notes

1. IP65 Rated
2. Heavy duty finned steel tube.
3. Matt black high temperature powder coated finish.
4. Suitable for floor or wall mounting.
5. Terminal box welded to tube and sealed to IP65.

EQUIPMENT SCHEDULE

Lombardini22
DESIGN THINKING
Black&White

LOUVRES

Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-																
Date:	03/05/2024																
By:	JN																

Louvre Reference	Unit Reference	Type	QTY	Airflow	Face Velocity	Louvre Free Area	Pressure Drop	Nominal Size	Louvre Area	Remarks / Comments
				L/s	m/s	%	Pa	mm	m^2	
Intake Louvres										
IAL01-01	AHU01-O-01	Intake Air Louvre	1	585	2 (max)	50%	35	550 x 550	0.30	
IAL02-01	AHU01-O-02	Intake Air Louvre	1	825	2 (max)	50%	35	650 x 650	0.42	
IAL02-02	AHU01-O-05	Intake Air Louvre	1	735	2 (max)	50%	35	650 x 650	0.42	
IAL03-01	AHU01-O-03	Intake Air Louvre	1	245	2 (max)	50%	35	350 x 350	0.12	
IAL03-02	AHU01-O-04	Intake Air Louvre	1	235	2 (max)	50%	35	350 x 350	0.12	
IAL03-03	AHU01-O-07	Intake Air Louvre	1	225	2 (max)	50%	35	350 x 350	0.12	
IAL03-04	AHU01-O-08	Intake Air Louvre	1	225	2 (max)	50%	35	350 x 350	0.12	
IAL03-05	HRU01-O-01	Intake Air Louvre	1	215	2 (max)	50%	35	350 x 350	0.12	
IAL03-06	SEAF08-O-01	Intake Air Louvre	1	190	2 (max)	50%	35	350 x 350	0.12	
IAL04-01	AHU01-O-06	Intake Air Louvre	1	435	2 (max)	50%	35	500 x 500	0.25	
IAL05-01	AHU03-O-01	Intake Air Louvre	1	275	2 (max)	50%	35	400 x 350	0.14	
IAL06-01	AHU02-O-01	Intake Air Louvre	1	3295	2 (max)	50%	35	1300 x 1300	1.69	
IAL07-01 to 04	SIAF02-O-01 to 04	Intake Air Louvre	4	360	2 (max)	50%	35	450 x 450	0.20	
IAL08-01 to 04	SIAF01-O-01 to 04	Intake Air Louvre	4	8600	2 (max)	50%	35	2100 x 2100	4.41	
IAL09-01	SIAF03-O-01	Intake Air Louvre	1	990	2 (max)	50%	35	700 x 700	0.49	
IAL09-02	SIAF03-O-02	Intake Air Louvre	1	870	2 (max)	50%	35	700 x 700	0.49	
IAL10-01 to 02	SIAF04-O-01 to 02	Intake Air Louvre	2	1970	2 (max)	50%	35	1000 x 1000	1.00	
IAL11-01 to 06	SIAF06-O-01 & SIAF07-O-01 to 05	Intake Air Louvre	6	692	2 (max)	50%	35	600 x 600	0.36	
IAL12-01 to 02	EAF01-O-01 to 04	Intake Air Louvre	2	3019	2 (max)	50%	35	1250 x 1250	1.56	
IAL13-01	SEAF05-O-01	Intake Air Louvre	1	145	2 (max)	50%	35	300 x 250	0.08	
IAL14-01 to 08	SEAF09-O-01 to 08	Intake Air Louvre	8	2280	2 (max)	50%	35	1100 x 1100	1.21	
IAL15-01 to 02	SEAF07-O-01 to 02	Intake Air Louvre	2	315	2 (max)	50%	35	400 x 400	0.16	

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EQUIPMENT SCHEDULE

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LOUVRES

Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-																
Date:	03/05/2024																
By:	JN																

Louvre Reference	Unit Reference	Type	QTY	Airflow	Face Velocity	Louvre Free Area	Pressure Drop	Nominal Size	Louvre Area	Remarks / Comments
				L/s	m/s	%	Pa	mm	m^2	
Extract Louvres										
EAL01-01	AHU01-O-01	Exhaust Air Louvre	1	585	2.5 (max)	50%	60	550 x 550	0.30	
EAL01-02 to 05	SEAF02-O-01 to 04	Exhaust Air Louvre	4	705	2.5 (max)	50%	60	550 x 550	0.30	
EAL02-01	AHU01-O-02	Exhaust Air Louvre	1	825	2.5 (max)	50%	60	650 x 650	0.42	
EAL02-02	AHU01-O-05	Exhaust Air Louvre	1	735	2.5 (max)	50%	60	650 x 650	0.42	
EAL03-01	AHU01-O-03	Exhaust Air Louvre	1	245	2.5 (max)	50%	60	350 x 350	0.12	
EAL03-02	AHU01-O-04	Exhaust Air Louvre	1	235	2.5 (max)	50%	60	350 x 350	0.12	
EAL03-03	AHU01-O-07	Exhaust Air Louvre	1	225	2.5 (max)	50%	60	350 x 350	0.12	
EAL03-04	AHU01-O-08	Exhaust Air Louvre	1	225	2.5 (max)	50%	60	350 x 350	0.12	
EAL03-05	HRU01-O-01	Exhaust Air Louvre	1	215	2.5 (max)	50%	60	350 x 350	0.12	
EAL03-06	SEAF05-O-01	Exhaust Air Louvre	1	285	2.5 (max)	50%	60	350 x 350	0.12	
EAL04-01	AHU01-O-06	Exhaust Air Louvre	1	435	2.5 (max)	50%	60	500 x 500	0.25	
EAL04-02 to 03	SEAF07-O-01 to 02	Exhaust Air Louvre	2	615	2.5 (max)	50%	60	500 x 500	0.25	
EAL05-01	AHU03-O-01	Exhaust Air Louvre	1	355	2.5 (max)	50%	60	400 x 350	0.14	
EAL06-01	AHU02-O-01	Exhaust Air Louvre	1	2670	2.5 (max)	50%	60	1050 x 1050	1.10	
EAL07-01 to 04	SEAF01-O-01 to 04	Exhaust Air Louvre	4	11255	2.5 (max)	50%	60	2200 x 2200	4.84	
EAL08-01	SEAF03-O-01	Exhaust Air Louvre	1	1950	2.5 (max)	50%	60	900 x 900	0.81	
EAL08-02	SEAF03-O-02	Exhaust Air Louvre	1	1715	2.5 (max)	50%	60	900 x 900	0.81	
EAL09-01 to 02	SEAF04-O-01 to 02	Exhaust Air Louvre	2	3880	2.5 (max)	50%	60	1250 x 1250	1.56	
EAL10-01 to 02	SEAF06-O-01 to 04	Exhaust Air Louvre	2	3019	2.5 (max)	50%	60	1100 x 1100	1.21	
EAL11-01 to 08	SEAF09-O-01 to 08	Exhaust Air Louvre	8	4500	2.5 (max)	50%	60	1400 x 1400	1.96	
EAL12-01	SEAF08-O-01	Exhaust Air Louvre	1	370	2.5 (max)	50%	60	400 x 400	0.16	

ADDITIONAL NOTES

Item	B&W Specifies	Vendor Proposes
01	This datasheet shall be read in conjunction with all other datasheets, drawings and Employer's Requirements.	
02	All louvres are to be specified by Architect. The performance data in the schedule is for information only to provide indicative louvre size, performance and free area requirements.	
03	This equipment schedule has been prepared for tender purpose only.	

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EQUIPMENT SCHEDULE

OVERDOOR HEATER

Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-																
Date:	03/05/2024																
By:	NC																

Building Ref	Room Ref	Equipment Ref	Heating method	Inside air temperature (°C)	Outside air temperature (°C)	Mounting Arrangement	Mounting Height (m)	Door Height (m)	Door Width (m)	Heating duty (kW)	Fan motor type	Power Supply (V / Hz / Ph)	Limiting Sound Level dB(A)	Remarks / Comments
MIL05	Lobby	AC01-O-01	Electric heater	20	-4	Horizontal above door	3.3	3.2	2.4	0.9	EC	Fan: 230/50/1 Heater: 400/50/3	45	Maximum electric load must not exceed 8 kW, 3 phase
MIL05	Loading Bay	AC02-O-01 AC02-O-02	Electric heater	20	-4	Horizontal above door	3.9 3.9	3.8 3.8	3 3	2 2	EC	Fan: 230/50/1 Heater: 400/50/3	55	Maximum electric load must not exceed 8 kW, 3 phase. One overdoor air curtain heater per door.

ADDITIONAL NOTES

Item	B&W Specifies	Vendor Proposes
01	This datasheet shall be read in conjunction with all other datasheets, drawings and Employer's Requirements.	
02	Air curtain units to be laboratory tested for aerodynamic performance and acoustic sound power testing.	
03	Provide a totally enclosed, sealed for life, continuously rated induction motor.	
04	Provide fans, motor and drive assembly mounted on base frame, isolated to prevent transmission of vibration to unit.	
05	Casing finish as per architecture requirements and specifications.	
06	Air curtain units shall cover the full width of the doorway and just wider than the door opening specified.	
07	Filter type/class to meet ISO ePM10 50% minimum.	
08	Filter removal/withdrawal via the underside of the unit.	
09	Thermistor sensor shall be provided and integrated to the system to fully automic the temperature control of the air curtain to meet the desired room temperature to minimise energy consumption.	
10	Fan speed control via automatic door activation switch to control unit. Refer to the BMS specifications for BMS interface requirements and full control strategy.	
11	This equipment schedule has been prepared for tender purpose only.	

EQUIPMENT SCHEDULE

OVERPRESSURE DAMPER

Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-														
Date:	03/05/2024														
By:	MT/JN														

Reference	Location	Area Served	Type	Quantity	Air Flow Rate	Width	Height	Fire Rated	Relief Pressure	Remarks/Comments
					L/s	mm	mm	(Yes/No)	Pa	
OPD01-01 to 08	Datahall	Refer to Schematic Drawings	Wall Mounted	8	15-450	500	500	Yes	12.5	
OPD02-01 to 04	IDF	Refer to Schematic Drawings	Wall Mounted	4	90-100	250	250	Yes	12.5	

ADDITIONAL NOTES

Item	B&W Specifies	Vendor Proposes
01	Schedule to be read in conjuction with Specifications, Data sheet, Layouts and Schematics.	
02	All flow rate is based on the maximum capacity of the ventilation equipment subject to final selection.	
03	Colour and finish shall be approved by architect/interior designer	
04	Manufacturer shall make selections for engineer's approval.	

MECHANICAL EQUIPMENT SCHEDULE

PRESSURIZATION UNITS AND EXPANSION VESSELS			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

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Revision History:

Revision:	-											
Date:	03/05/2024											
By:	EC											

PRESSURISATION UNIT AND EXPANSION VESSEL SCHEDULE

PRESSURISATION UNIT												EXPANSION VESSEL							REMARKS / COMMENTS
REFERENCE	QTY	LOCATION	SYSTEM	FLUID TEMP	DESIGN / WORKING PRESSURE	ELECTRIC POWER		DIMENSIONS			OPERATING WEIGHT	REFERENCE	QTY	TANK CAPACITY	DIMENSIONS		OPERATING WEIGHT	EXPANSION VESSEL TYPE	
						INPUT	SUPPLY	LENGTH	WIDTH	HEIGHT					DIAMETER	HEIGHT			
				°C	bar	kW	V / PH / Hz	mm	mm	mm	kg			liters	mm	mm	kg		
PU01-XX	2	Chilled Water Ancillary Room	24 MW CHILLED WATER SYSTEM	32.0	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	EV01-XX	2	5000 (Basic Vessel)	1500 Ø	3570	Manufacturer to advise	Manufacturer to advise	
												TBC	TBC	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	Manufacturer to advise	

Notes:

1. THIS EQUIPMENT SCHEDULE SHALL BE READ IN CONJUNCTION WITH THE PROJECT DRAWINGS AND SPECIFICATIONS.
2. THIS EQUIPMENT SCHEDULE HAS BEEN PREPARED FOR PRELIMINARY ESTIMATE ONLY.

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Vacuum Degasser

Vacuum Degasser			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	VD01-O-XX		

Revision History:

Revision:	-											
Date:	03/05/2024											
By:	NC											

Vacuum Degasser

1.00 Manufacturer's Details

Item	Description	Units	Vendor Specifies
1.01	Manufacturer's Name		
1.02	Manufacturer's Local Office Location		
1.03	Manufacturer's Global Head Office		
1.04	Location of Factory and Assembly		
1.05	Location of Factory Acceptance Tests		
1.06	Manufacturer's Quotation Reference		
1.07	Manufacturer's Model Number		
1.08	Manufacturer's Model Data Sheet Reference		

2.00 Site Data

Item	Description	Units	B&W Specifies	Vendor Complies
2.01	Site Location		Vignate, Italy	
2.02	Equipment Location		Chiller Plant Room	
2.03	Site Altitude	m	121	

3.00 Unit Type

Item	Description	Units	B&W Specifies	Vendor Proposes
3.01	Quantity (24 MW System)		4	
3.02	Flow Rate (per unit)	L/s	Manufacturer to advise >>	
3.03	Flow Temperature	°C	22	
3.04	Return Temperature	°C	32	
3.05	Fluid Type		Water	
3.06	Glycol Content	%	0	
3.07	System Water Content (24 MW System)	L	515,974	
3.08	Maximum Ambient Temperatures	°C	37.9	
3.09	Minimum Operating Temperature	°C	Manufacturer to advise >>	
3.10	Maximum Operating Temperature	°C	Manufacturer to advise >>	
3.11	Minimum Operating Pressure	kPa	Manufacturer to advise >>	
3.12	Maximum Operating Pressure	kPa	Manufacturer to advise >>	
3.13	Main Pump		Vertical Multistage	

4.00 Physical Data

Item	Description	Units	B&W Specifies	Vendor Proposes
4.01	Overall Width	mm	Manufacturer to advise >>	
4.02	Overall Height	mm	Manufacturer to advise >>	
4.03	Overall Depth	mm	Manufacturer to advise >>	
4.04	Dry Weight	kg	Manufacturer to advise >>	
4.05	Maximum Operating Weight	kg	Manufacturer to advise >>	
4.06	CHW Inlet/Outlet Connection	mm	Manufacturer to advise >>	

5.00 Additional Facilities

Item	Description	Units	B&W Specifies	Vendor Proposes
5.01	BMS interface		Yes	

Vacuum Degasser			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Data Sheet Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		
Equipment Reference:	VD01-O-XX		

Revision History:

Revision:	-											
Date:	03/05/2024											
By:	NC											

Vacuum Degasser				
6.00 Electrical Data				
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Proposes**
6.01	Main Power Supply	V/Ø/Hz	Manufacturer to advise >>	
6.02	Unit Maximum Absorbed Power	kW	Manufacturer to advise >>	
6.03	Unit Maximum Rated Power	kW	Manufacturer to advise >>	
6.04	Unit Maximum Running Current	A	Manufacturer to advise >>	
6.05	Unit Maximum Starting Current	A	Manufacturer to advise >>	
6.06	Unit Full Load Power Factor		Manufacturer to advise >>	
6.07	Unit Full Load Corrected Power Factor		Manufacturer to advise >>	
6.08	Recommended Main Supply Circuit Breaker Rating	A	Manufacturer to advise >>	
7.00 Approved Manufacturers				
Item	**Description**	**Units**	**B&W Specifies**	**Vendor Proposes**
7.01	Approved Manufacturers		Flamco or equal & approved.	
8.00 Notes				
Scope/Notes:				
8.01	Equipment schedule / data sheet to be read in conjunction with schematics, general arrangement plans and stage reports.			
8.02	Performance/dimensional requirements based on most onerous configuration.			

FIRE PROTECTION SCHEDULES

Fire Pump Schedule

Air Compressor and Nitrogen Generator

MECHANICAL EQUIPMENT SCHEDULE

Fire Protection Pumps Schedule			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/24
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/24							
By:	MM							

General Data

Unit Reference	SPRFP-00-01	SPRFP-00-02	SPRJP-00-01	HYDFP-00-01	HYDFP-00-02	HYDJP-00-01
Quantity	1	1	1	1	1	1
Configutration	Duty	Standby	Duty	Duty	Standby	Duty
Location	Sprinkler Pump Room	Sprinkler Pump Room	Sprinkler Pump Room	Hydrant Pump Room	Hydrant Pump Room	Hydrant Pump Room
System	Sprinkler System	Sprinkler System	Sprinkler System	Hydrant System	Hydrant System	Hydrant System
Type	Diesel Fire Pump, Horizontal Splitcase	Diesel Fire Pump, Horizontal Splitcase	Electric Jockey Pump, Vertical Inline	Diesel Fire Pump, Horizontal Splitcase	Diesel Fire Pump, Horizontal Splitcase	Electric Jockey Pump, Vertical Inline

Performance Data

Service Rated Flow Rate (L/s)	90	90	1	26	26	1.53
Head (bar)	8.5	8.5	9.5	8	8	9
Rated Power (kW)	N/A	N/A	3	N/A	N/A	3
Voltage (V)	N/A	N/A	380-415	N/A	N/A	380-415
Frequency (Hz)	N/A	N/A	50-60	N/A	N/A	50-60
Phase	N/A	N/A	3	N/A	N/A	3
Rated Current (Amp)	N/A	N/A	6.5	N/A	N/A	6.5

Construction Data

Pump Casing	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Length (mm)	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>
Width (mm)	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>
Weight (kg)	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>	Manufacturer to Advise >>
Engine Cooling System	Heat Exchanger	Heat Exchanger		Heat Exchanger	Heat Exchanger	

Accessories

Anti Vibration Mountings	✓	✓	✓	✓	✓	✓
Fuel Tank Capacity	1135 Lit	1135 Lit		460 Lit	460 Lit	
Control Panel	✓	✓	✓	✓	✓	✓
Pressure Switch Array	✓	✓	✓	✓	✓	✓
Exhaust System	✓	✓		✓	✓	
Discharge Cone	✓	✓		✓	✓	
Eccentric taper reducer at pump inlet	✓	✓		✓	✓	
Cocentric taper reducer at pump discharge outlet	✓	✓		✓	✓	
Pump Gauges	✓	✓	✓	✓	✓	✓
Automatic Air-Release Valve for Fire Pump Casing	✓	✓		✓	✓	
Relief Valve for Fire Pump Casing	✓	✓		✓	✓	

BMS

Outputs to BMS

Pressure	✓	✓	✓	✓	✓	✓
Temperature	✓	✓	✓	✓	✓	✓

Fire Alarm

Outputs to Fire Alarm

Engine/Motor Running	✓	✓		✓	✓	
Fault	✓	✓		✓	✓	
Fuel Tank Low Fuel	✓	✓		✓	✓	
Fuel Tank Leak	✓	✓		✓	✓	
Control Main Switch in Off or Manual Position	✓	✓		✓	✓	

Manufacturer

Manufacturer	TBC
Contact Name	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>
Internet Address	Manufacturer to Advise >>

Additional Information

1. This datasheet shall be read in conjunction with all other datasheets, drawings and specifications.
2. Fire contractor shall calculate and verify flow and pressure based on hydraulics calculations before ordering the pumps.
3. Each fire diesel pump shall be provided with individual diesel tanks.
4. Equipment schedule / data sheet information provides RIBA Stage 3 Schematic Design status information.

MECHANICAL EQUIPMENT SCHEDULE

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Air Compressor and Nitrogen Generator Schedule			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/24
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/24							
By:	MM							

General Data

Unit Reference	NG-00-01	AC-00-01				
Quantity	1	1				
Configutration	Duty	Duty				
Location	External Fire Pump Room	External Fire Pump Room				
System	Sprinkler System & Dry Hose Reel System	Sprinkler System & Dry Hose Reel System				
Type	Nitrogen Generator	Oil-less, Tank Mounted Air Compressor				

Performance Data

System Capacity (L)	9450	12800				
Head (bar)	2.76	2.76				
Rated Power (kW)	2	2				
Voltage (V)	460	460				
Frequency (Hz)	60	60				
Phase	3	3				
Rated Current (Amp)	10	10				
Nitrogen Purity (%)	98					

Construction Data

Casing	Manufacturer to Advise >>	Manufacturer to Advise >>				
Length (mm)	Manufacturer to Advise >>	Manufacturer to Advise >>				
Width (mm)	Manufacturer to Advise >>	Manufacturer to Advise >>				
Weight (kg)	Manufacturer to Advise >>	Manufacturer to Advise >>				

Accessories

Anti Vibration Mountings	✓	✓				
Tank	✓	✓				
Control Panel	✓	✓				
Pressure Switch	✓	✓				
Gas Analyzer	✓					
Hour Meter, Cycle Counter, Air Bypass Alarm, Leak Alarm, Flow Meter	✓					

BMS

Outputs to BMS

Pressure	✓	✓				
Temperature	✓	✓				
Fault	✓	✓				

Manufacturer

Manufacturer	TBC
Contact Name	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>
Internet Address	Manufacturer to Advise >>

Additional Information

1. This datasheet shall be read in conjunction with all other datasheets, drawings and specifications.
2. Fire contractor shall calculate and verify capacities before ordering equipment.
3. Equipment schedule / data sheet information provides RIBA Stage 3 Schematic Design status information.

PH EQUIPMENT SCHEDULES

PH Pumps Schedule

Water Treatment Schedule

Water Tank Schedule

Water Heater Schedule

MECHANICAL EQUIPMENT SCHEDULE

PH Pumps Schedule			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/2024
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/2024							
By:	MA							

General Data

Unit Reference	BP-00-01	CP-00-01
Quantity	2	1
Configutration	Duty / Standby	Duty
Location	Domestic Water Room	Domestic Water Room
System	Booster Pump for Domestic Waetr Supply	Domectic Hot Water recirculating pump
Type	Packaged VFD Booster Pump set / Horizontal end-suction	Canned Rotor

Performance Data

Service Rated Flow Rate (m^3/hr)	8.93	1.08
Head (bar)	5.2	1
Rated Power (kW)	3	0.176
Voltage (V)	380-415	230
Frequency (Hz)	50-60	50-60
Phase	3	1
Rated Current (Amp)	8.3	1.42

Construction Data

Pump Casing	Cast Iron	Stainless
Length (mm)	690	150
Width (mm)	650	120
Weight (kg)	100	2.66

Accessories

Anti Vibration Mountings	✓	☒

BMS

Outputs to BMS

Pressure	✓	✓
Temperature	☒	✓

Manufacturer

Manufacturer	Fabricated products or equal and approved
Contact Name	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>
Internet Address	Manufacturer to Advise >>

Additional Information

1. This datasheet shall be read in conjunction with all other datasheets, drawings and specifications.
2. Electrical details, motor kW rating, sound power level, equipment dimensions and weights shall be confirmed by the manufacturer.
3. Contractor to submit actual pump head calculations based on shop drawings for Engineer's assessment prior to procurement and production.
4. This datasheet has been prepared for Tender purposes only.

MECHANICAL EQUIPMENT SCHEDULE

Water Treatment Schedule - Water Softener			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/2024
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/2024							
By:	MA							

General Data

Unit Reference	WS-00-01
Quantity	1
Location	Domestic Water Room
System	Water Softening for CHW Make-up and Domestic Hot Water System
Type	Duplex Configuration

Performance Data

Service Rated Flow Rate (m^3/hr)	14.8
Pressure Loss (bar)	1
Power Consumption (Watts)	22
Voltage (V)	230/24
Frequency (Hz)	50-60
Operating Pressure (bar)	2.4 - 8.6
Influent maximum hardness ($^o f$)	907

Construction Data

Softener Resin Diameter (mm)	522
Softener Resin Tank Height (mm)	2045
Pipe Inlet / Outlet (mm)	50
Brine Tank Diameter (mm)	762
Brine Tank Height (mm)	1270

Manufacturer

Manufacturer	Fabricated products or equal and approved
Contact Name	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>
Internet Address	Manufacturer to Advise >>

Additional Information

1. This datasheet shall be read in conjunction with all other datasheets, drawings and specifications.
2. Electrical details, motor kW rating, sound power level, equipment dimensions and weights shall be confirmed by the manufacturer.
3. This datasheet has been prepared for Tender purposes only.

MECHANICAL EQUIPMENT SCHEDULE

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Water Treatment Schedule - Water Softener			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/2024
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/2024							
By:	MA							

General Data

Unit Reference	AD-00-01	AD-00-02
Quantity	1	1
Location	Domestic Water Room	Domestic Water Room
System	Water Disinfection for Domestic Hot Water System	Legionella Biocide Dosing
Type	Vertical	Vertical

Performance Data

Recommended Dosage	1.5 - 2 L/min³	1.5 - 2 L/min³
Chemical Type	Belox	Bio Guard H41H02
Pump Type	Electromagnetic	Electromagnetic
Max. Flow Rate (L/hr)	2	2
Voltage (V)	230	230/24
Frequency (Hz)	50-60	50-60
Maximum Pressure (bar)	18	18
Frequency (pulses/minute)	140	140

Construction Data

Tank Capacity	100	100
Tank Diameter (mm)	460	510
Tank Height (mm)	640	755
Tank Material	PE	PE

Manufacturer

Manufacturer	Fabricated products or equal and approved
Contact Name	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>
Internet Address	Manufacturer to Advise >>

Additional Information

1. This datasheet shall be read in conjunction with all other datasheets, drawings and specifications.
2. Electrical details, motor kW rating, sound power level, equipment dimensions and weights shall be confirmed by the manufacturer.
3. This datasheet has been prepared for Tender purposes only.

MECHANICAL EQUIPMENT SCHEDULE

Water Treatment Schedule - Water Filter			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/2024
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/2024							
By:	MA							

General Data

Unit Reference	FIL.A-00-01
Quantity	1
Location	Domestic Water Room
System	Water Filter for Domestic Water System
Type	In-line Self-Cleansing filter

Performance Data

Service Rated Flow Rate (m^3/hr)	6.48
Fitting (mm)	40
Filtering Capacity (micron)	60
Pressure loss (bar)	0.2

Construction Data

Filtering Cartridge	Stainless
Width (mm)	110
Height (mm)	300
Weight (kg)	3.4

Manufacturer

Manufacturer	Fabricated products or equal and approved
Contact Name	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>
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MECHANICAL EQUIPMENT SCHEDULE

Water Tank Schedule			
Project Title	MIL-05		
Project Number	P10471	Date	03/05/2024
Document Number		Rev	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/2024							
By:	MA							

General Data

Unit Reference	WT-00-01	FWT-00-01
Quantity	1	1
Location	Domestic Water Room	External Fire Pump Room
System	Potable Water Supply	Sprinkler, Hose Reel, & External Hydrant System
Type	GRP Watet Tank	Cylindrical Galvanised Steel

Performance Data

Tank Capacity	2.5m³	450m³

Construction Data

Tank Width (mm)	1500	8000 (diameter)
Tank Length (mm)	1500	
Tank Height (mm)	1500	10000
Material	GRP	Galvanised Steel
Exterior Finish	Smooth Finish	Smooth Finish
Supply Connection	25 mm	150 mm
Outlet	50mm	250 mm
Lifting Lug	Yes	No
Side Manhole	No	Yes
Drain Connection	Yes	100 mm
Overflow Pipe	Yes	200 mm
Warning Pipe	Yes	25 mm
Fire Pump Test Return	No	200 mm
Vortex Inhibitor	No	Yes
Float Valve Chamber	Yes	Yes
High Level Sensor	Yes	Yes
Low Level Sensor	Yes	Yes
Contents Gauge	Yes	Yes
External Ladders	Yes	Yes
Immersion Heater	No	Yes
Temperature Probe	Manufacturer to Advise >>	Yes
Insulation	Yes	Yes

BMS

Outputs to BMS

Temperature	✓	✓
Water Level	✓	✓

Fire Alarm

Outputs to Fire Alarm

Low Water Level	☒	✓
High Water Level	☒	✓
Low Water Temperature	☒	✓
Water Heater Fault	☒	✓

MECHANICAL EQUIPMENT SCHEDULE

Water Tank Schedule			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/2024
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/2024							
By:	MA							

Manufacturer

Manufacturer	Fabricated products or equal and approved	Fabricated products or equal and approved
Contact Name	Manufacturer to Advise >>	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>	Manufacturer to Advise >>
Internet Address	Manufacturer to Advise >>	Manufacturer to Advise >>

Additional Information

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2. Equipment dimensions and weights shall be confirmed by the manufacturer.
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MECHANICAL EQUIPMENT SCHEDULE

Water Heater Schedule			
Project Title	MIL-05		
Project Number	P10471	**Date**	03/05/2024
Document Number		**Rev**	-
Purpose of Issue	RIBA Stage 3 - Schematic Design		

Revision History:

Revision:	-							
Date:	03/05/2024							
By:	MA							

General Data

Unit Reference	DHW-00-01
Quantity	1
Location	Domestic Water Room
System	Domestic Hot Water Heater
Type	Air Source Heat Pump

Performance Data

Storage Capacity (Litres)	300
Rated Heat Pump Power Input (Watts)	985
COP	2.85
Back Up Element (kW)	3
Frequency (Hz)	50-60
Operating Pressure (bar)	6 - 8
Recommended Electrical Circuit (Amps)	15

Construction Data

Tank Diameter (mm)	725
Tank Height (mm)	1825
Refrigerant	R134a
Tank Material	Enamel Lined Tank

Manufacturer

Manufacturer	Fabricated products or equal and approved
Contact Name	Manufacturer to Advise >>
Telephone Number	Manufacturer to Advise >>
Fax Number	Manufacturer to Advise >>
E-mail Address	Manufacturer to Advise >>
Internet Address	Manufacturer to Advise >>

Additional Information

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Black&White

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